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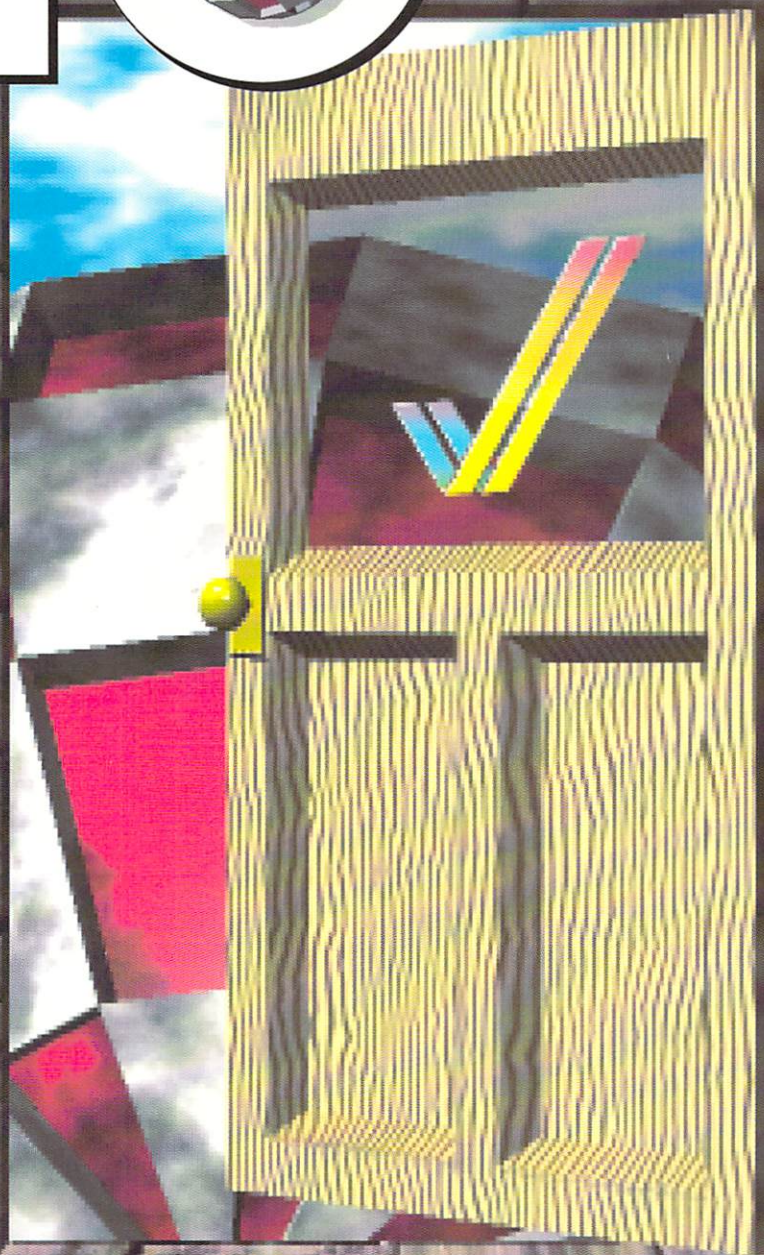


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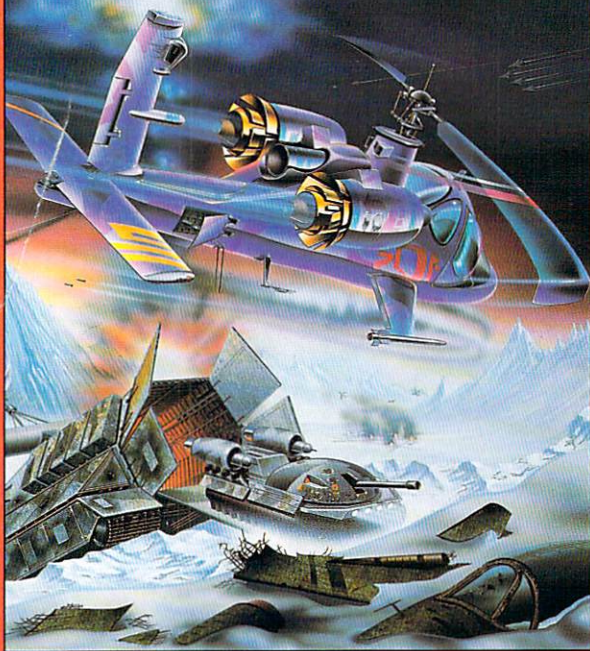
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#41
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ARMOUR-GEDDON

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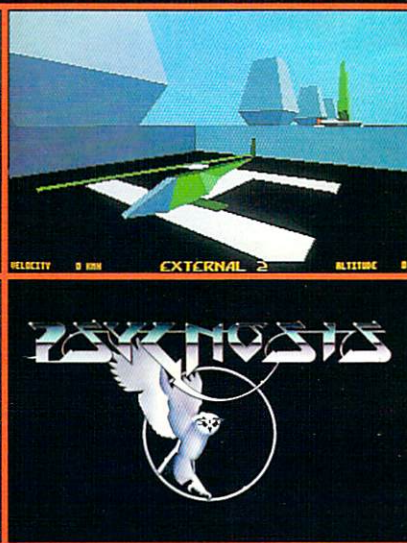
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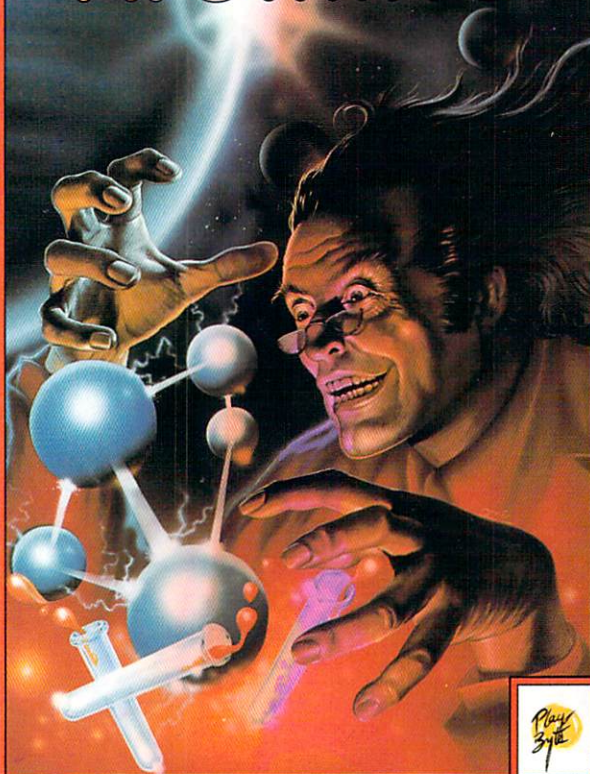
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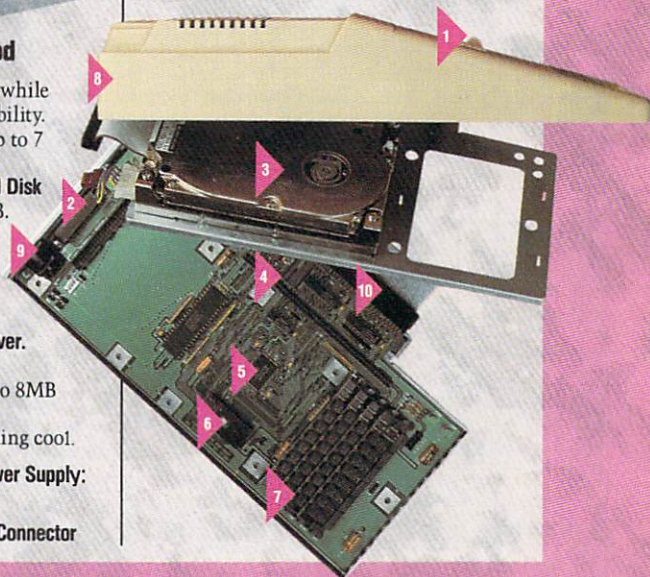
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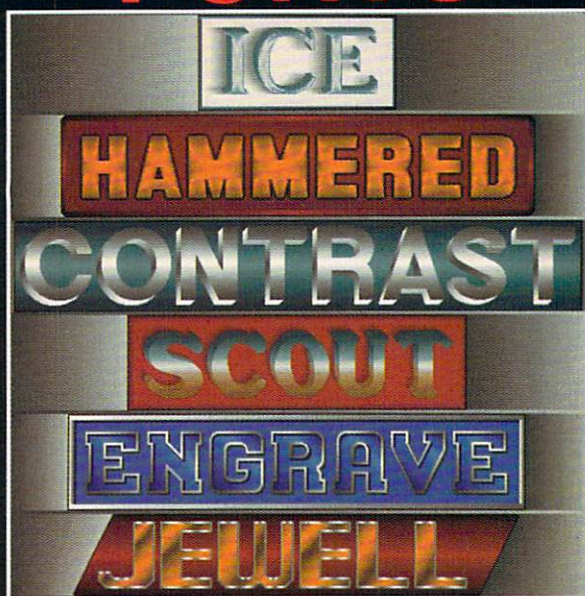
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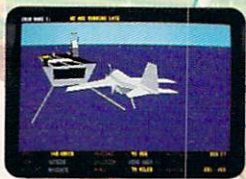
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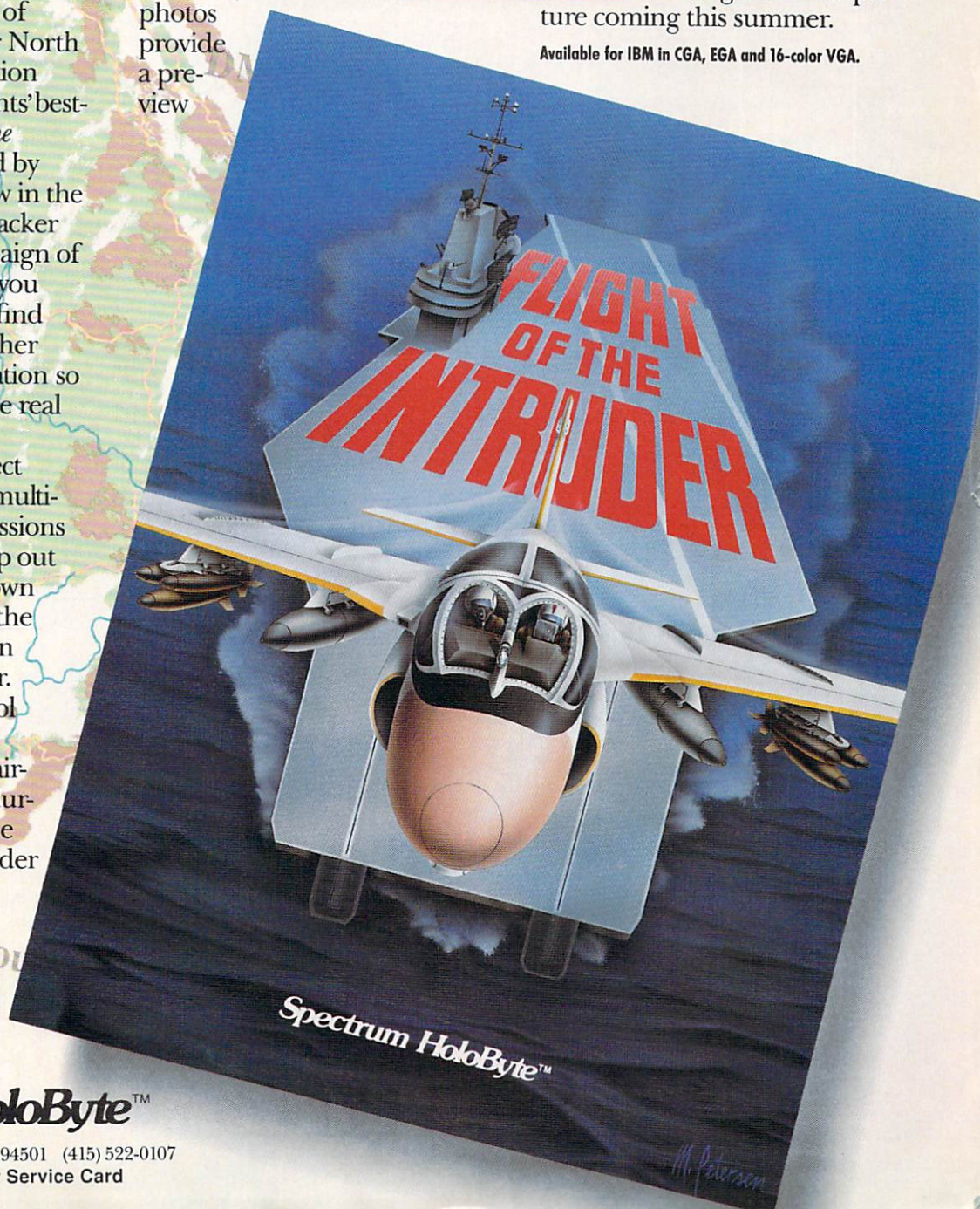
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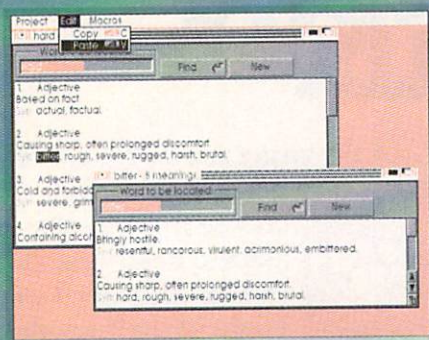


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ABOUT .info

.info strives to be a clear voice for Amiga users and a showcase for the talented people and exceptional products of the Amiga computer community. Everything in this magazine (except for some of the ads) is digitally created, edited, and color separated as complete pages on Amigas running off-the-shelf software and peripherals, and output directly to film.



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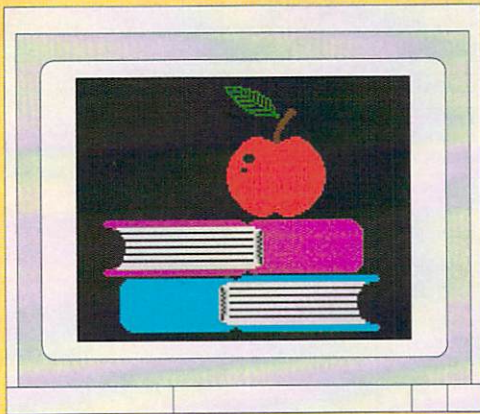
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.info Monitor

*This is a
guest editorial
by Mike Levin of the
Philadelphia Amiga Users Group.*

GOING BACK TO SCHOOL

What happens when a user group is coupled with a school that is in need of support? We have seen it happen with universities (as with our own Philadelphia Amiga Users Group and the Virginia Polytechnic Institute), but how about primary and secondary schools? We've all heard of the occasional instructor who fights the system to obtain an Amiga for the classroom. But think of the good things that could happen when the efforts of these special teachers are combined with the volunteerism that is demonstrated in Amiga user groups.

My vision is for schools that are interested in the creative power of the Amiga computer to be adopted by local Amiga user groups. This would provide a base for student extracurricular activities, a source for professional guest speakers for the classroom, free technical assistance for the school, possible meeting places for the user group, and a recruiting pool for group membership. Everyone benefits!

A logical extension to these cooperative activities would be for the students, teachers, and user group members to engage in audio/visual projects together. Public access television could be the medium for sharing the results with the community, providing both a justification for these activities and a tremendous esteem-boost for the kids involved. The creative potential of students (empowered by the Amiga computer) coupled with the volunteerism of user groups mates perfectly with the program-hungry public access channels of cable television.

All we need is a school to serve as a model and some people to get the momentum going. We're in luck. We happen to have several outstanding

models and some superb people. The user group adopt-a-school idea is by no means my own. In fact, it has been independently suggested and actively initiated by several others, including PAUG members Jack Schwartz and Stuart Goldman, and Sid Schaudies and Chuck Cave of the Central Ohio Amiga Users' Group. Here's just one example of what's already being done:

Stephen Schneider of the Sherwood Alternative Middle School heads a lab consisting of 18 Amiga 2000s, where he teaches digital art to over 650 students. On April 17th, the school was adopted by the Central Ohio Amiga Users' Group. The event coincided with an article in *USA Today* that talked about Stephen Schneider and his use of the *Mandala* virtual reality system. Stephen and the user group have already produced a program for their local public access TV channel and are working on a second. Sid Schaudies, the Secretary of the user group, is excited about this three-tiered approach involving user groups, schools, and public access television.

To educators and people outside the Amiga community, activities like this often sound unmanageable and expensive. We know better. It works when three vital elements are present: a user group with active members, a school with an involved teacher and Amiga facilities, and a public access TV channel. I believe that almost all students would be excited to participate in such activities, especially if they were incorporated into the curriculum.

Clearly, getting the Amiga into education is good for the Amiga and good for the kids. But how do we make it happen? First of all, we need some leadership and some schools to serve as models. We've already got that with people like

Sid Schaudies and Stephen Schneider.

Next, we need to make it happen in more places. That requires recruiting the help of all the Amiga crusaders out there. (You know who you are!) Teachers who own their own Amigas are one of our most important assets, but without help, such teachers simply can't win the battle to get Amigas into their schools. If we can get educational magazines, newspapers, and local TV stations to do stories of the successes of our model schools, that will help. Let's not forget the communication power of electronic bulletin boards and the university-oriented supernetworks. User group newsletter exchange programs can also help spread the word.

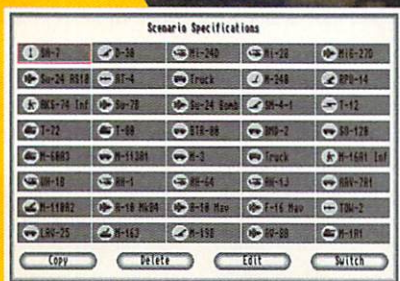
And let's not forget our partner in this proposition; Commodore. They are proving their commitment to education with such products as the CDTV multimedia platform, *AmigaVision* authoring system, and UNIX. They have also launched programs like the Amiga Student On-Campus Consultants (currently working at several dozen colleges), the *AmigaVision* Script Contest, and the education purchase program. All of these are compatible with the user group adopt-a-school movement proposed here. This program will take only a minimum commitment on Commodore's part. All we ask is some official acknowledgement from Commodore, and maybe some promotional literature to make the efforts of active user groups more effective.

Those interested in becoming involved in a user group 'adopt-a-school' program should write to: Philadelphia Amiga Users Group, PO Box 21186, Philadelphia, PA 19154-0386, or contact me electronically on the PAUG BBS at 215-632-8312.

- Mike Levin

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Everybody knows that Amiga games are probably the best games for personal computers, as far as graphics, sound, and animation go. But they lack a great deal when compared to IBM-PC games. I just bought two new games and brought them home only to find that they don't run on my Amiga 3000. (1) Why do IBM games run regardless of whether you have an XT, AT, or 386? (2) Why do IBM users have the luxury of installing their games on a hard drive? (3) Why can't game publishers treat the machines equally? I'm pretty fed up with games that have to be booted from floppy and won't run if your drive is just a hair too slow or too fast. Sure, Amiga games are great, but publishers have a long way to go before they'll get any more of my money.

- David Prothero, Centralia, WA

Here goes: (1) IBM games are generally written for the lowest common denominator (CGA graphics, 8088 cpu, & 640K RAM), but games requiring expansion are becoming more common. IBM users now have to read the boxes pretty carefully. (2) It's more of an issue in the IBM market because more IBM users have hard drives. (3) The answer is Money. Game publishers look mostly to the bottom line, and IBM games are where the vast majority of their sales are. More and more, games are being written for IBM and then ported, sometimes with enhance-

ments, sometimes without. Traditionally, users of Commodore equipment have been regarded as more likely to pirate software (true or not, that is the unfortunate perception), which accounts for the heavier protection. Publishers are finally realizing the error of their thinking and are both dropping on-disk copy protection and adding hard drive installation routines. Things are getting better, but it's a long process.

- Benn & Mark

Think globally, act locally. That, I believe, is the key to promoting the Amiga. The Amiga is finally being recognized by the mainstream computer press. Magazines like *Byte*, *InfoWorld* and even *MacWorld* are mentioning it. But still, the word is not getting to everyone. Writing letters to magazines is one of the easiest ways anyone can help make changes. If you see an article on video that doesn't mention the Amiga, tell them that they aren't telling their readers the full story and ask why. If you see a buyers' guide for home computers, check to see if the Amiga 500 is mentioned. If not, write and tell them it was missed. Remember, creative and intelligent people brought the Amiga to where it is today: not fanatics, not marketing, but people willing to try new and different ideas.

- Zoltan Hunt, Beeton, Ontario, Canada

Well said! Yelling, screaming, cursing Apple and IBM, and acting all the while like some sort of irrational zealot is the surest way to turn people off to what you have to say. The advice you give is precisely what we Amiga-philosophers need to do to promote our favorite machines. It's not going to happen overnight, but if we keep plugging away, writing and talking, the Amiga will surely succeed.

- Mark & Benn

I purchased an Amiga 2000 about two years ago and not until now have I realized I have a problem. I bought a game called *Codename Ice-man* and it wouldn't work on my computer, but it would on a friend's Amiga 500. So, I checked to see if I could find out what was wrong with my computer. The

problem was that I had no fast memory. Usually, when a game doesn't work on my 2000, I put a higher stack size in the startup-sequence and then it works. It didn't work this time. I can't animate in *Deluxe Paint*, either. Is it the same problem? What would be the best way to fix this problem, more memory?

- Chad Tysinger, Lexington, NC

You're right. You need more memory. Your Amiga 2000 came equipped with one megabyte of RAM (random access memory), which at one time would have meant you'd have 512K of chip RAM and 512K of fast RAM. But most Amigas built in the last couple of years come with a "Fatter Agnus" chip which allocates the entire first megabyte as chip RAM. Chip RAM is used by the Amiga's special coprocessor chips for graphics, animation, and sound, and this is why Commodore made the change (and why they ship two megabytes of chip RAM with the A3000). Unfortunately, some older programs were written so that they expected at least some fast RAM in the system. All expansion RAM is fast RAM, so if you plug in a RAM expansion card of any size, you'll be set.

- Benn & Mark

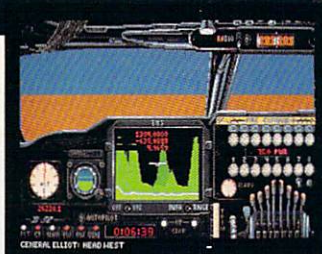
I was just looking through my old issues of *.info* and came across the first copy I ever had, #23 from 1988. It changed me forever. I had never known what an Amiga was until a friend with a C64 gave the magazine to me. I was shocked. I thought a Mattel Intellivision was "lots of fun". Your magazine has raised me up to appreciate the Amiga as it really is, the greatest entertainment device known to mankind. Thank you for a super magazine, and a super machine.

- John Erickson, Las Vegas, NV

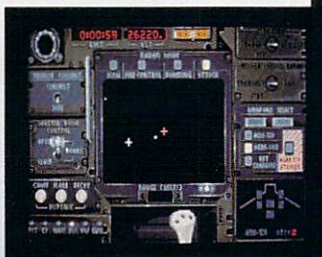
While we can't take credit for the Amiga, we can say thanks for this issue's ".info is Great" letter! We didn't know we were changing lives! We might also add that, while the Amiga is certainly a terrific entertainment device, we would expand the description to say it's a super productivity machine, too.

- Mark & Benn

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Montage of textures and images from the *ImageCELS* CD-ROM



CD

We are beginning to see more Amiga-compatible CD-ROMs these days. The latest is **ImageCELS**, a huge collection - about 1150 - of texture maps and images. This is actually a multiplatform CD-ROM, with all of the images repeated in different formats for different machines: 256 color IFF, GIF, .PCX, .116 (the Intel D.V.I. format), .CEL (Lumena), TGA 16/24/32-bit, TIFF 8/24-bit, Apple PICT2 24-bit, and .DIB 8-bit for Windows 3.0. The images are divided up into subdirectories, making it easier to wade through them to find what you need. Another point to be made about the textures is that they are seamless. In other words, you can replicate an image, such as stone, and not have lines where the pieces are joined together. Some of the categories of images include brick, marble, metal, roofing, tiles, and even people. Price for the CD is \$395 and it's from *Imagetects*, 7200 Bollinger Road, #802, San Jose, CA 95129. 408-252-5487.

OH FORTY

We have recently found out about a new 68040 accelerator for the A2000 series. The **Fusion-Forty** comes with 4 megs of 32-bit RAM onboard and is expandable to 16 and 32 megabyte (!) configurations. Some of the benchmarks we've seen are impressive, claiming a

speed of 25 Mhz and 3.5+ MFLOPS. It's built on a 6-layer board with separate power and ground planes. It includes a hardware switch if you need to disable it and go back to using your original 68000 processor. Base price for the unit with 4 megs of RAM installed is \$2995. The accelerator comes from *RCS Management*, 120 McGill St., Montreal, PQ Canada H2Y 2E5. 514-871-4924.

FOURTH DIMENSION PRO

Adspec Programming has released a companion product to *Draw4D*, their structured drawing package. While *Draw4D* is primarily aimed at the desktop publishing market, **Draw4D-Pro** is targeted at desktop video. In addition to what *Draw4D* does, *Draw4D-Pro* also has the ability to use bitmaps as textures, which can be wrapped, projected, or tiled onto objects. The number of lights that can be used is unlimited, Gouraud shading can be used to eliminate the polygonal look of some objects, and images can be saved in 24-bit files that can be used in framebuffers. The software also incorporates an Eyepath option for setting the viewpoints for animations, making it ideal for architectural flythroughs. *Draw4D-Pro* also has a new animation technique it calls Multi Level Deforms; it allows the animator to change the size, position, etc. of polygons and then automatically generate the tween frames. The Deforms can be

combined with other animation techniques so you could have objects rotating, translating, and deforming simultaneously. One of the more interesting features is the ability to use multiple spaces, which *Adspec* calls the equivalent of multiple pages in page layout software. It means you can create any number of "spaces", which could either be used as independent areas (a sort of 3-dimensional portfolio), or as one large area for very large scenes. Cost is \$349, and registered owners of *Draw4D* can upgrade for \$100. 1405 N. Ellsworth Avenue, Salem, OH 44460. 216-337-3325.

©UTE TITLE

I would like to know who started all this weird spelling for software titles. It's so out of control these days that no one knows how to spell, capitalize, or punctuate any of the things. The latest example is **©opyright**, a new disk archiver from *InnerPrise* (see, there's another one!). Anyway, we'll refer to the software from here on as *Copyright*. (No, not *CopyRight*, not *COPYright*, not *CopyRight*, and most definitely not ©.) Among the features are routines to check drive speed and alignment, check the disk media, erase a disk, and format a disk (it claims 34 seconds to do it). *Copyright* also comes with a special disk to clean your drive heads. \$49.95. 128 Cockeysville Road, Hunt Valley, MD 21030. 301-785-2266.

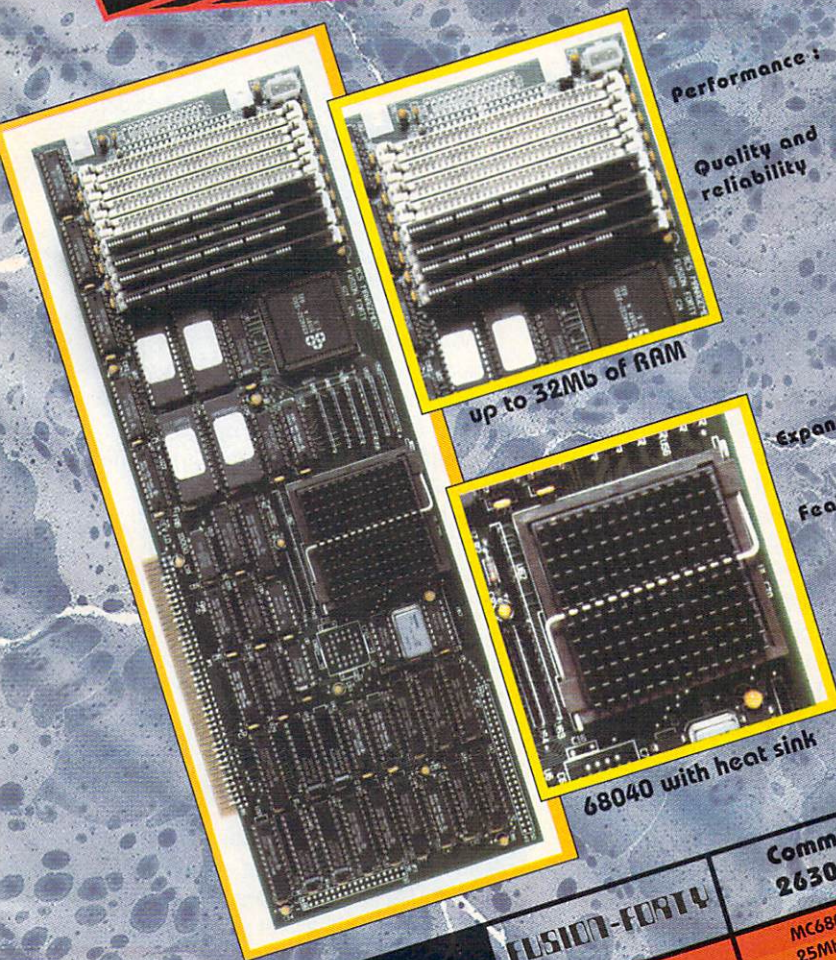
TOASTER SOLUS

NewTek has announced a standalone **Video Toaster** at a price of \$3995. In reality, it's a *Toaster* installed in an A2000 (with NewTek labels pasted over the Amiga ones) equipped with 5 megs of RAM, with the *Toaster* software on a 52 meg hard drive. It doesn't include a timebase corrector (TBC), though *NewTek* has one available for an additional \$995. The interesting thing to note is that the word 'Amiga' appears nowhere in either the slick brochure or in the press release. 215 S.E. Eighth Street, Topeka, KS 66603. 913-354-1146.

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- 18 - 25 MIPS, 3.5 - 8.0 MFLOPS
- 32-Bit RAM

Quality and reliability :

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- extensive use of decoupling devices minimizes electrical noise.
- high-performance clock for the tight electrical specifications of the MC68040.
- heat sink to dissipate heat generated by the MC68040.

Expandability :

- memory available in 4 Mb, 16Mb and 32Mb configurations.

Features :

- hardware select switch to disable accelerator board and run original processor.
- asynchronous design for Genlock compatibility.
- user object code compatibility with all earlier Motorola 68000 series microprocessors.
- compatible with Videotoaster, Imagine and other software.
- one year warranty.

	FUSION-FORTY	Commodore 2630	GVP R3001	IBM i486
Processor	MC68040	MC68030	MC68030	i80486
Clock Speed	25Mhz	25Mhz	25Mhz	25Mhz
Mips	20+	5.8 +	6.4 +	15
MFLOPS	3.5+	Less than 1	Less than 1	1.
Cache Sizes	4Kbytes x 2	256bytes x 2	256bytes x 2	8kbytes
Burst Memory(32bit) on board	Yes	NO	YES	yes
	4M Standard Max 32 M	2M Standard Max 4 M	(Needs DaughterBoard)	

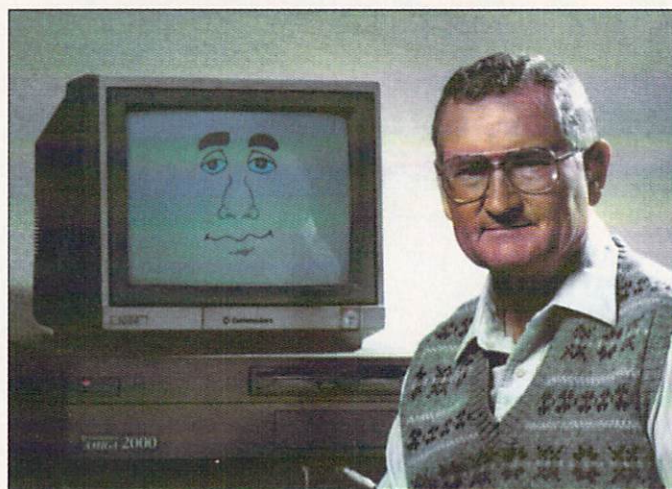


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NEW PRODUCTS



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move in
Animation 101

ANIM TAPE

There have been a goodly number of tutorial videotapes over the Amiga's lifetime, and the best we've seen lately is one called **Animation 101**, from *Myriad Visual Adventures*. It contains very practical, down-to-earth advice on how to create an animation using off-the-shelf Amiga software and hardware (primarily *Deluxe Paint III*). The information is presented in an entertaining way and the techniques are clearly explained. Some of the methods are a little different from what you might expect, but all of them keep the goal of a finished animation clearly in the forefront. If your dealer doesn't have the tape, it's available for \$35 from Myriad Visual Adventures, 1210 N. W. 79th Street, Oklahoma City, OK 73114.

DELTA SOUND

New from *Deltaware Products* is **A-Sound Elite**, a complete reworking of the company's previously released *A-Sound 2.0*. This sample editing software has a couple of features that look like they'll make working with digitized sound samples easier than ever. Most notable is an Undo feature, something that should be standard equipment on nearly everything. It also supports sequencing, recording to disk in realtime, ARexx, flexible resampling, special effects, and, most important of

all, stereo in all operations. The software will work directly with the *Perfect Sound 3.0* digitizer, and will create multi-octave instruments for *Sonix* and *DMCS*. Samples can be played back at rate over 100Kbytes per second. Files can be saved in the standard 8SVX IFF or RAW formats, though there's also a proprietary format called ASF. The novelty of the ASF format is that it doesn't require a player program in order to play back the sounds; the player is built into each file. No price had been set at presstime. 3148 Kingston Road, Suite 202, Box 395, Toronto, ON Canada M1M 1P4. 416-431-2047.

SO WHERE'S THE TROPHY?

1st Prize Toasted Fonts is the latest font collection we've seen for the Video Toaster. This batch comes from Lion Kuntz, who's been known for his Amiga fonts for a number of years now. It is comprised of 228 fonts and retails for \$349.95. The fonts are also available broken up into five smaller packages retailing for \$69.95 each. Allied Studios makes particular note that the typefaces "conform to the public's expectations and remembrance of what the letters are supposed to look like," which means that the fonts are on a par with the characters you see on commercial TV. Allied Studios has also released a collection of **600 Amiga Fonts**, which is comprised of six disks crammed to the

write-protect with fonts. The bitmap fonts themselves have been converted from the PD collections distributed to the Macintosh community by B.M.U.G., the Bay Area Mac User Group. Allied has redone each font in *The Calligrapher* to make sure they work properly and are spaced correctly. 482 Hayes Street, San Francisco, CA 94102. 415-863-1781.

RGB VIDEO

RGB Computer & Video continues their line of high-quality, professionally-oriented desktop video products with **AmiLink/CI**. The software is designed to use with Consumer-Industrial video equipment, which is probably where the CI of the title comes from. The list of VCRs and camcorders it handles is far too long to list here, but includes all the popular makes and models. It has sophisticated editing controls, edit list input and output, a programmable GPI trigger, and time-code capability with +/- 1 frame accuracy. RGB has also added software control for the Toaster.

Depending on what combination of software and hardware you need, the price will be in the \$1000.00 neighborhood. 3944 Florida Blvd., Suite 4, Palm Beach Gardens, FL 33410. 407-622-0138.

SAFETY NET

Ami-Back is the latest hard drive backup utility we've seen on the market. The most notable feature is the scheduler, which will let you perform unattended backups (unless someone has come up with a disk changer, though, you'll be limited to using the scheduler when backing up from hard drive to another hard drive or to tape). There are also options for file exclusions, datestamping, renaming files, and so on. It claims to be fast, with an average time of 43 seconds to fill a floppy. There are separate versions on the disk for Workbench 1.3 and 2.0. \$79.95. *Moonlighter Software Development*, 3208-C East Colonial Drive, Suite 204, Orlando, FL 32803. 407-628-3005.

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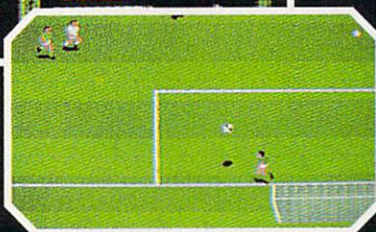
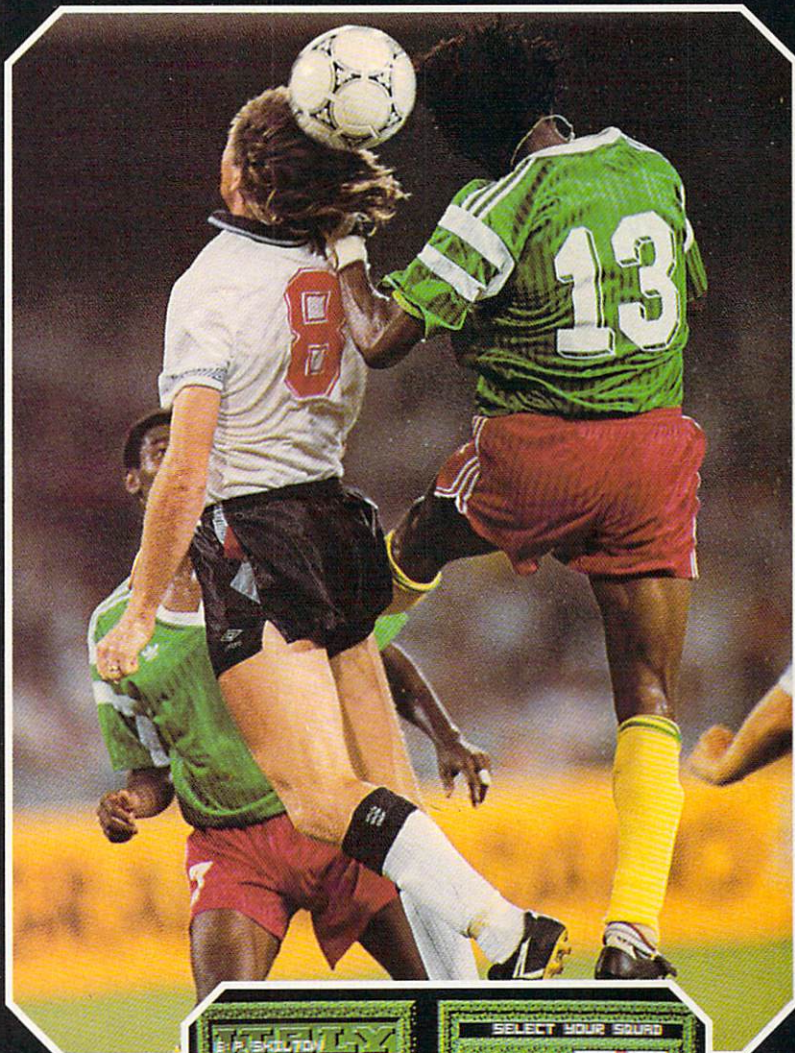


Screen shots are only intended to be illustrative of the game play and not the screen graphics which vary considerably between different formats in quality and appearance and are subject to the computers specifications.

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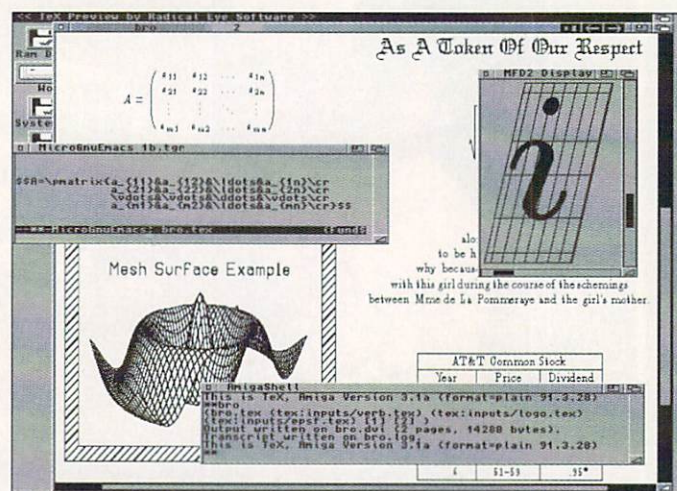
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NEW PRODUCTS

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TEX SUPPORT

Radical Eye Software has released a major revision of their standard-setting typesetting software, **Amiga TEX**. The biggest change is onscreen PostScript display, for both PostScript fonts (Type 3 and hinted Type 1) and graphics. These fonts and graphics are automatically rendered for the screen display or for any printer. This version is compatible with TEX 3.1 and Metafont 2.7 (it also runs under AmigaDOS 2.0), and there are many printer drivers available. TEX is an enormously complex and capable typesetting system, and the Amiga version is generally acknowledged to be the best of the many implementations for various platforms. It is widely used in book publishing, especially for mathematical texts, though it is flexible enough to use for publishing virtually anything. Base price is \$200, with printer drivers costing from \$75 to \$100. Site licenses are available for \$1500. Owners of previous versions can upgrade for \$10 per disk. PO Box 2081, Stanford, CA 94309. 415-322-6442.

AMIGA KNIT

We have recently run across an overlooked segment of the Amiga market. A company called *Cochenille Computer Knit Products* has come out with an interface that will let you hook an

Amiga to an electronic knitting machine. Among the machines the **Bit Knitter** supports: Brother 930, 940 and 950I; Knitking Compuknit III/IV; Studio/Singer 580, 840, 860, and 890; Passap E6000. More are on the way. The included software will take the output from a paint program (*DPaint* is recommended) and convert it to a form the interface can understand. There's also an optical switch that can be mounted in the knitting machine which allows the user to knit interactively. Cost of this wonderment is \$499. Included in that price is a copy of **Designing Knits on Your Home Computer** (available separately for \$28), a 150-page book detailing how to create gridded knitting designs using *Deluxe Paint*. It even includes an art disk. PO Box 4276, Encinitas, CA 92023. 619-942-1957.

ALL THAT JAZZ

Two of the more creative products we've seen lately come from *New Sound Music*. **Jazz Through MIDI** is essentially a course in improvisational jazz that can be downloaded into your sequencer and synthesizer. It provides 60 solos with rhythm accompaniment, chord charts for the solos, and supports most MIDI/Drum Machine setups. It's also compatible with Dr. T's sequencers. \$45.95. **Background Rhythm Patterns** contains over 150 different accompaniments that can be edited together how-

ever you want. Everything from Rock to Country to Hip Hop, Soul, and Blues is included, along with a collection of intros, breaks, and endings. It's all in standard MIDI format for loading into your synthesizers and sequencers. Price is \$42.95. PO Box 37363, Oak Park, MI, 48237. 313-355-3643.

SUPRA HARDWARE

Supra has recently added **SupraRam 500RX** to their hardware lineup. It's a 1/2-8MB RAM expansion box that plugs into the left side of an A500 and even has a pass-through, the only one we've ever seen that does. That means you could still plug in a hard drive like Commodore's A590. If power becomes a problem, the box can also accept its own optional external power supply. Price is \$169.95 for the 1 meg version, \$279.95 for 2 megs. On the modem side of things, there are three **SupraModem 2400s**. The **Plus** is an external model that supports the Microcom Network Protocol (MNP) and sells for \$239.95. The **2400zi Plus** is an internal model for the A2000 and A3000 and allows as many as five different modems to be used simultaneously. It costs \$229.95. The \$199.95 **2400 MNP** has somewhat less atomic error correction and data compression, though if you decide later on that you need it, \$40 will upgrade it to the same capability of the *SupraModem 2400 Plus*. By the way, Supra has also added bootblock virus protection and a no-click function to their external floppy drive. The **SupraDrive** goes for \$149.95. 1133 Commercial Way, Albany, OR 97321. 503-967-9075.

HARDCOPY

Impulse had barely pushed *Imagine* out the door when the first third-party book about it showed up. **The Imagine Companion** retails for \$29.95 and includes not only tutorials and tips, but a disk of examples as well. Available at your local dealer or directly from a company with one of the better names we've heard lately, *Motion Blur Publishing*. 915A Stambaugh Street, Redwood City, CA 94063.

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NEWS & VIEWS

CATCH-22

We have heard from several dealers who received a letter from Ronald E. Stanczak, Commodore VP of Sales. The letter, dated April 7, 1991, detailed additions to Commodore's product line, including the A2000 HD Professional, A500 Starter Pack, C286 IBM-clone

laptop, and CDTV. After extolling the merits of CDTV, the letter stated: "Those of you interested in selling the CDTV player should note that it may be sold through outbound sales efforts only. This means exhibiting the machine on your showroom floor or advertising the product will be strictly prohibited." Naturally, some dealers were upset by this policy.

When contacted by *.info*, Mr. Stanczak explained, "The CDTV player is primarily a consumer product. It's a home entertainment and information center, not a computer. We didn't want the issue confused during the rollout period. Frankly, one of our options would have been to just place it in consumer sales environments. CDTV is not even in the computer section at Sears; it's displayed in the home entertainment section. But we wanted the computer dealers to have a chance to sell it, too." He further explained that the policy has since been updated. "Most of the dealers didn't have a problem with it. Now that the rollout period is over, dealers can advertise CDTV, and demo it in the showrooms as long as it's hooked to a TV, not a computer monitor. The only thing they can't advertise is pricing."

.info UPDATE

VERSIONS

- ✓ Blue Ribbon SoundWorks' *Bars & Pipes Professional* is now at version 1.0c. They've fixed some bugs and included a few enhancements, such as the ability to create a blank "new.song" file that can be used to save the current composition environment. 1293 Briardale NE, Atlanta, GA 30306. 404-377-1514.
- ✓ Software Support International is shipping version 2 of *Maverick*, their disk archive software. Registered owners of the first edition can upgrade for \$20. 2700 NE Andresen Road, Suite A-10, Vancouver, WA 98661. 206-695-1393.
- ✓ *Graphics Workshop*, from Holosoft Technologies, is now at version 1.01. It has had some bugs fixed, its performance improved, and also had a tutorial book added. Contact Holosoft for more information. 1637 E. Valley Parkway, Suite 172, Escondido, CA 92027. 619-747-0663.

CHANGES

- ✓ DigiTek has moved to 1916 Twisting Lane (is this a description of Superman's girlfriend doing a Chubby Checker dance?), Wesley Chapel, FL 33543. The new phone numbers are 813-973-7733 voice, 813-973-7888 FAX.
- ✓ Taliesin, Inc. has announced that they're changing their company

name to Stylus, Inc. The address remains PO Box 1671, Ft. Collins, CO 80522. (FYI: Taliesin comes from Welsh mythology, but it's best-known as the name of Frank Lloyd Wright's homes, one in Wisconsin and another, Taliesin West, in New Mexico.)

- ✓ Magni Systems has lowered the price for their 4004 genlock to \$995.00, and it now includes the previously optional 4010 *Remote Control* at no extra charge. 9500 SW Gemini Drive, Beaverton, OR 97005. 503-626-8400.

OOPS

- ✓ We printed an incorrect address for SunRize in the May issue. The correct address is 2959 S. Winchester Blvd., Suite 204, Campbell, CA 95008. 408-374-4962 voice, 408-374-4963 FAX.
- ✓ Tom must have been brain-dead when he reported an old address as a new one for M.A.S.T. Now that he has been properly punished (we gave him a new arcade game and then took away his joystick), the correct address is 1395 Greg Street, #106, Sparks, NV 89431. 702-359-0444 voice, 702-359-0831 FAX.
- ✓ WordPerfect has announced a price reduction for *WordPerfect Library* from \$129 to \$29.95. While WordPerfect won't come right out and say they're discontinuing the product, such a drastic price reduction is bound to give one pause...

AMIGA UNIX GOES TO SCHOOL

At the Virginia Polytechnic Institute, all incoming computer science majors purchase the Amiga 3000UX. They are a beta test site for Commodore, and are very happy with the wares. To demonstrate their commitment to VPI, Commodore recently hosted an exciting show on campus.

Items on exhibit included a network of 3000UX computers. One sported the University of Lowell 2410 hi-res color card with a Mitsubishi Diamondscan monitor, yielding resolutions of 1024x800 with 256 colors out of 16 million. Another 2410 system drove the regular Commodore 1950 multiscan monitor, one drove the Commodore 2024 high resolution monochrome monitor, and yet another was hooked to a standard 1084S. This machine also controlled a laserdisc player and genlock... under UNIX!

Of even more interest to many of the folks at VPI were the AmigaDOS applications which were on display, including the NewTek *Video Toaster*, Digital Creation's *DCTV*, the *Mandala* virtual reality system, *AmigaVision*, *Deluxe Paint III*,



NEWS & VIEWS

and several CDTV units. Seminars were hosted throughout the day and a keynote address was given by the vice president of UNIX International, an organization committed to the UNIX System V release 4 open system.

One thing which went over extremely well was the presence of the actual Commodore UNIX engineers. The VPI Amiga Users' Group - which consists almost exclusively of the computer science majors - talked at length with the people who would be sitting down the next day working on the code. What an opportunity! The atmosphere was generally one of good feeling, common goals, and exciting things to come. VPI serves as yet another example of what happens when an organization chooses their computing equipment based on the merit and value of the machine.

This article by Mike Levin was originally compiled & published by the Philadelphia Amiga Users Group for the May 1991 issue of the Blitter. Reproduced by permission.

CD COMPETITION

CDTV has some major competition coming in the form of CD-I. The Magnavox CDI910 will debut at the Summer Consumer Electronics Show in Chicago. According to The Rowland Company, the PR agency handling the rollout, the units will go on sale through "major consumer electronic retailers nationwide" this October. The player and the technology behind it were developed by European-based electronics industry giant Philips.

MERGERS & ACQUISITIONS

Buyouts and takeovers have hit the Amiga community in a big way lately. There have been three - count 'em, three - major changes of ownership in the past month.

Lake Forest Logic has been acquired by Great Valley Products. Illinois-based Lake Forest's product line includes *The Disk Mechanic* and *Macro Paint*. These products will nicely complement GVP's hardware line. GVP also acquires the talents of Lake Forest's Erik Quackenbush, who becomes GVP's Director of

Software. Lake Forest's offices in Illinois will be closed.

We've also learned of a "non-binding letter of intent" to sell Precision Software to Software Publishing Corporation of Mt. View, California, a large IBM software publisher. The sale isn't too surprising, considering that British-based Precision's *Superbase Professional 4* is a big hit in the Big Blue market. It didn't hurt matters that Precision posted earnings of \$10 million last year, either. The pricetag for Precision is reported to be \$25 million. There has been no word yet on whether the new owners will continue to support the recently released Amiga version of *SBPro4*.

Central Coast Software has become a part of New Horizons, publisher of *ProWrite*, among other titles. Central Coast's *Quarterback* is probably the most widely-used hard disk backup utility among Amiga users. Central Coast's Golden, Colorado operation will be moved to New Horizon's Austin, Texas offices. New Horizons promises continued updates and support for *Quarterback* and the rest of Central Coast's product line as well.

THE NEXT SHOW

World of Commodore/Amiga,
July 12-14, Sydney, Australia



THE RUMOR MILL

DISCLAIMER: The following are among the most entertaining rumors we've heard the past month. They are presented for your entertainment and amusement only. Please do not make any important decisions based on these rumors, as some will prove to be inaccurate or just plain false.

➤ Micro Systems Software has *Baby!* - their Webster's Dictionary and Thesaurus - done, but won't be releasing it. Why? Because 'there's no room for it' in the Amiga market.

➤ Waterloo Maple Software sent beta copies of the newly Amiga-tized *Maple* to beta testers, then followed it up with a letter saying that development has been held up until Commodore finalizes v2.0 of the operating system. They say they were running into too many problems caused by version updates.

➤ Just who is... The Joker? And why can't he get his hands on any of those marvelous toys?

➤ There are some troubling rumors to the effect that, since the Reagan administration 'deregulated' the FCC, bribes are now almost the

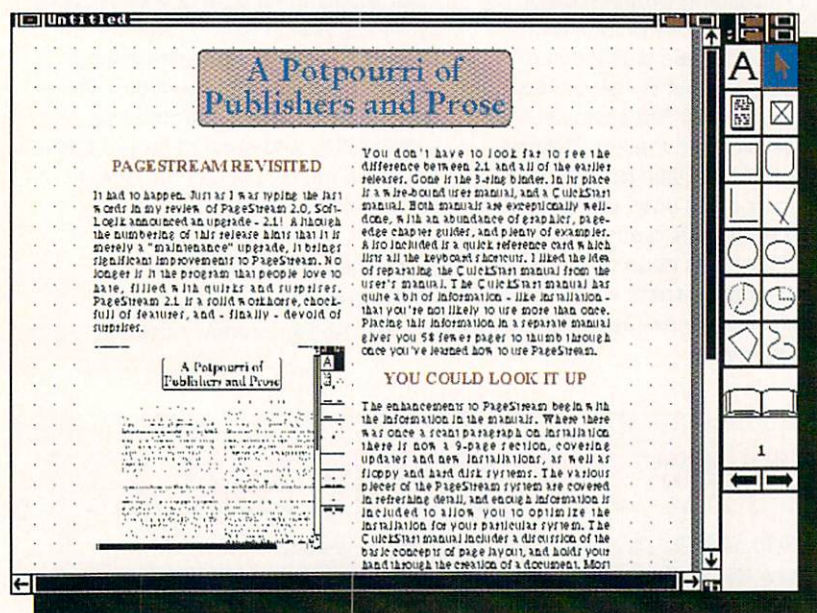
standard operating procedure for receiving FCC product approval.

➤ It is rumored that Commodore has an outside consultant evaluating their Education program... to determine whether it should live or die. If that's the case, let's all hope they get back a 'thumbs up'.

➤ CBU stock is see-sawing at about \$15 a share at presstime. Insiders blame the generally soft computer market. Apple has scheduled 10% staff cutbacks, and even Big Blue is 'scaling down'.

➤ While it's true that Apple and IBM both have machines out now that can (almost) match an Amiga's performance, neither of them can touch the A500's performance for its current street price of \$499. Remember that.

Jim Meyer on Productivity



A page goes together in Soft-Logik's *PageStream* 2.1.

PAGESTREAM REVISITED

It had to happen. Just as I was typing the last words in my review of *PageStream* 2.0, Soft-Logik announced an upgrade to version 2.1! Although the numbering of this release hints that it is merely a "maintenance" upgrade, it brings significant improvements to *PageStream*. No longer is it the program that people love to hate, filled with quirks and surprises. *PageStream* 2.1 is a solid workhorse, chock-full of features, and - finally - devoid of surprises.

Computer programs are tools, electronic aids which help us perform specific tasks. A good tool doesn't get in your way, doesn't break down when you use it. What good is a hammer if the head flies off every time you use it? In the same way, a program is of little use if it crashes or locks up in the middle of a job. The history of *PageStream* is that of a program struggling to evolve, to mature, a program which always showed great promise.

Unfortunately, that promise sometimes went unfulfilled. There were crashes, lockups, tools which didn't work properly, needed features which were missing. All of that changes, however, with the most recent release. With version 2.1, *PageStream* has truly become a professional tool.

You don't have to look far to see the difference

between 2.1 and all of the earlier releases. Gone is the 3-ring binder. In its place are a wire-bound user manual and a QuickStart manual. Both manuals are exceptionally well-done, with an abundance of graphics, page-edge chapter guides, and plenty of examples. Also included is a quick reference card which lists all the keyboard shortcuts. I like the idea of separating the QuickStart manual from the user's manual. The QuickStart manual has quite a bit of information - like installation - that you're not likely to use more than once. Placing this information in a separate manual gives you 58 fewer pages to thumb through once you've learned how to use *PageStream*.

YOU COULD LOOK IT UP

The enhancements to *PageStream* begin with the information in the manuals. Where there was once a scant paragraph on installation, there is now a 9-page section covering updates and new installations as well as floppy and hard disk systems. The various pieces of the *PageStream* system are covered in refreshing detail, and enough information is included to allow you to optimize the installation for your particular system. The QuickStart manual includes a discussion of the basic concepts of page layout, and holds your hand through the creation of a document. Most of the features of *PageStream* are touched upon in the tutorial.

The user manual will be your primary reference tool once you start using *PageStream*. I was pleased to see how much the manual had improved from earlier releases. The layout is excellent, the explanations are thorough and abundant, and it is very readable. The old manual was divided thematically, with sections named "Words on Paper," and "Basic Object." Now, the manual is organized into functional sections, such as "Working with Text" and "Working with Elements." Some of the changes are purely semantic, and some are the result of better organization, but they all serve to make the manual much easier to use. That's an important feature - if you can't find out how to perform a particular operation, the program becomes that much harder to use. The new *PageStream* manual is an example of how things should be done.

FASTER DISPLAY AND USABLE MACROS

My biggest problem with the previous releases of *PageStream* was the excruciating slowness of screen updates. Text which was typed directly into a document virtually crawled onto the screen. I'm pleased to

Jim Meyer
plays with a
potpourri of
publishing
and prose
programs.

report that Soft-Logik has managed to speed this process up by a factor of eight, by my own crude estimate. (A Soft-Logik representative gave a figure of 400% when asked how much faster the text display was.) This is not to say that screen updates are now blazingly fast, but they are on par with other programs. All Amiga DTP programs suffer from the same problem when using outline fonts for display: the operating system does not support them. This forces each company to work around the problem and invent their own solution. Commodore has promised to address this problem in a "future release."

I had a problem with macros in the last release of *PageStream*. More specifically, I had a problem with the lack of documentation for macros. The *PageStream* macro language allows you to record or describe a sequence of operations, and to perform those operations with a single keystroke. The old manual gave macros short shrift, devoting only two pages to them. Now there's a four-page section complete with examples. It's also easier to create a macro. Before, you had to type the macro into a string gadget using cryptic characters to represent various actions. That's still one of the options, but you can now record macros. Just hit the control key in combination with a function key. Every action you take will be recorded as a macro. You end the recording by hitting any function key.

NEW GRAPHIC OPTIONS

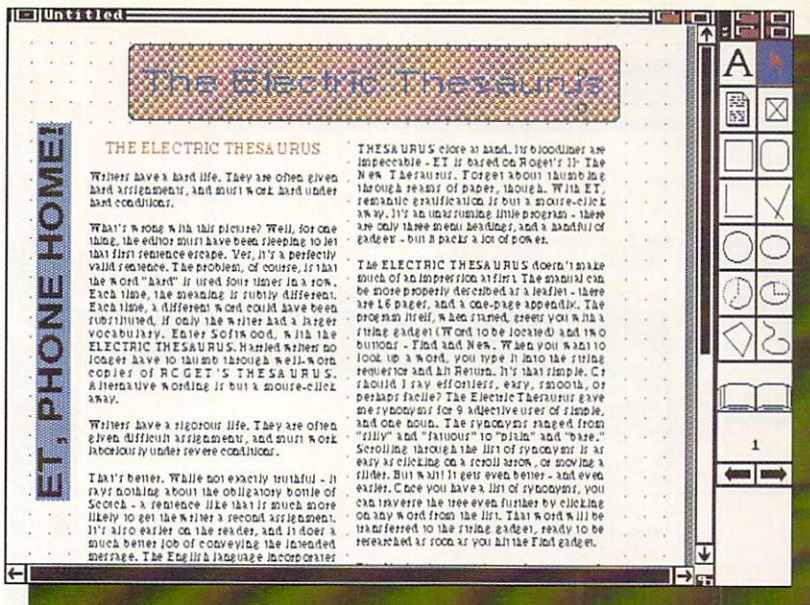
PageStream used to import just about any type of graphic you were likely to encounter. Now it imports even more. Support has been added for Graphic Interchange Format (GIF) images, and a module to support DCTV format images is currently undergoing beta testing. You can also import *ProDraw* images, provided those images were created without the Auto Trace function. PostScript support has been expanded to include the TIFF headers which accompany IBM EPS images. These headers contain bitmap information for the image, allowing it to be displayed onscreen. (The PostScript images themselves cannot be displayed without a PostScript interpreter.)

WHAT FLAVOR IS THAT COLOR?

PageStream allows you to define colors through every system I've ever heard of - CMYK, RGB, HSV, HLS/HSB, and YIQ. You'll find the CMYK variety of color definition to be useful if you use the Pantone Matching System. *PageStream* does not directly support Pantone PMS, but you can use the CMYK equivalent of a Pantone color to define it within your document. Should you load an EPS graphic which uses Pantone colors, they will automatically be appended to the color palette, along with their CMYK equivalents.

GOTCHA!

I don't have very many quibbles with *PageStream*. My major complaints - slow text display, inadequate documentation - have been fixed. In fact, if you go by the book - *exactly* by the book - you're unlikely to run into any problems. Here's one trouble spot, though,



Again, *PageStream* 2.1 in action.

which isn't covered by the manual: If you run *PageStream* from the CLI, without first issuing a "CD PAGESTREAM:" command, the drivers won't be loaded. While this won't affect printing - there's a requester which allows you to configure the printer - it means that you won't be able to import text or graphics. In theory, you should be able to tell *PageStream* where to find the drivers through the Set Paths requester, but this didn't work for me. I also had trouble configuring *PageStream* to start in any mode other than default. I followed the instructions to the letter, (Startup options are controlled through the Tooltypes field in the program's icon) but none of the changes I made had any effect. *PageStream* always came up in 4-color interlace mode on a custom screen.

PageStream just about has it all. Although I'm delighted with the features *PageStream* already has, I'd like to see support for irregular graphics, boxes with adjustable shadows, and direct support for a few more text features, like initial caps. Those aren't complaints, though, just items on my wish list. *PageStream* already delivers outstanding performance at an outstanding price. In the DTP horserace, *PageStream* has, in my opinion, pulled into the lead.

COMING SOON

Soft-Logik has announced the development of a number of new programs for the Amiga, including a structured drawing program, bitmap editor, wordprocessor, and inter-program communication (IPC) system. Those last two items are particularly interesting. If everything works as advertised, the IPC program will allow you to automatically insert text into a *PageStream* document, a capability that *Professional Page* already has. The announced intentions go beyond text, though. Soft-Logik says that their IPC system will allow two or more programs to "share

PageStream

v2.1

★★★★+

\$299.95

SoftLogik

11131

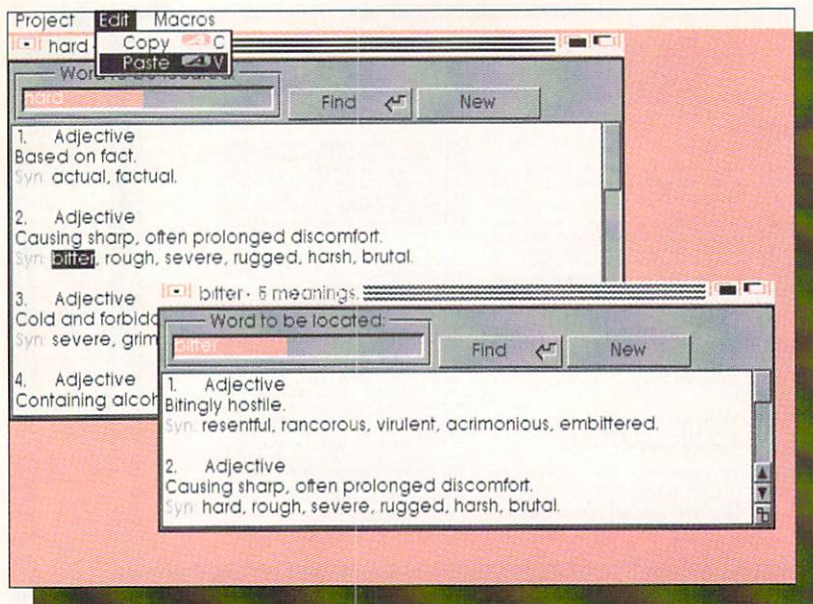
Southtown

Square,

St. Louis, MO

63129

314-894-8608



SoftWood's *Electric Thesaurus*, with two windows open.

common pictures, text, numbers and other data even while the program creating the data or document is still editing it."

THE ELECTRIC THESAURUS

Writers have a hard life. They are given hard assignments, and must work hard under hard conditions.

What's wrong with this picture? Well, for one thing, the editor must have been sleeping to let that first paragraph escape. [*No I wasn't! I was just resting my eyes! -Ed.*] Yes, it's a perfectly valid sentence. The problem, of course, is that the word "hard" is used four times in a row. Each time, the meaning is subtly different. Each time, a different word could have been substituted, if only the writer had access to a larger vocabulary. Enter SoftWood, with the *Electric Thesaurus*. Harried writers no longer have to thumb through well-worn copies of *Rogers's Thesaurus*. Alternative wording is but a mouse-click away.

Writers have a rigorous life. They are given difficult assignments, and must work laboriously under severe conditions.

That's better. While not exactly truthful - it says nothing about the obligatory bottle of Scotch - a sentence like that is much more likely to get the writer a second assignment. It's also easier on the reader, and it does a much better job of conveying the intended message. The English language incorporates more words than any other, and it is beyond the capabilities of most of us to remember more than a fraction of those words. That's where the thesaurus comes in.

You could, of course flip through your pocket thesaurus - I happen to have a copy of *Rogers's Pocket Thesaurus* on the bookshelf, as well as the hard-bound volume at the office - but how easy is that? The word "hard" can be found under Abstract Relations/Causation/Strength, or under Matter/Inorganic Matter/Hardness, or under Intersocial Voli-

tion/Severity, or under... Well, you get the idea. Using a paperbound thesaurus can be, well, hard.

The alternative is to have the *Electric Thesaurus* close at hand. Its bloodlines are impeccable - *ET* is based on *Rogers's II: The New Thesaurus*. Forget about thumbing through reams of paper, though. With *ET*, semantic gratification is but a mouse-click away. It's an unassuming little program - there are only three menu headings, and a handful of gadgets - but it packs a lot of power.

The *Electric Thesaurus* doesn't make much of an impression at first. The manual can be more properly described as a leaflet - there are 16 pages, and a one-page appendix. The program itself, when started, greets you with a string gadget (Word to be located) and two buttons - Find and New. When you want to look up a word, you type it into the string requester and hit Return. It's that simple. Or should I say effortless, easy, smooth, or perhaps facile? The *Electric Thesaurus* gave me synonyms for nine adjective uses of simple, and one noun. The synonyms ranged from "silly" and "fatuous" to "plain" and "bare." Scrolling through the list of synonyms is as easy as clicking on a scroll arrow, or moving a slider. But wait! It gets even better - and even easier. Once you have a list of synonyms, you can traverse the tree even further by clicking on any word from the list. That word will be transferred to the string gadget, ready to be researched as soon as you hit the Find gadget.

The display is convenient and easy to read. First, the word is broken down according to its various meanings. Each meaning is listed, along with its part of speech (adjective, noun, verb), definition, and a list of synonyms. There are quite a few synonyms in the database - over 500,000, according to the manual - and the list seemed quite complete. *ET* uses its own font, if it can find it, a sans-serif design which looks better in interlace. If you need more than one window - to simultaneously view synonyms for several different words, for example - *ET* supports multiple windows. You can cut and paste between these windows.

CLIPS AND SLIPS

ET supports cut and paste the "official" way - through the Clipboard. This shouldn't come as a surprise to folks from the Macintosh world, who have become accustomed to programs which support the standard features of the operating system, but it's something of a rarity in the Amiga community. That's too bad. With Clipboard support, it's possible to copy a word from an outside application into *ET*, and it's possible to paste a replacement word from *ET* into that (or any other) application. Alas, almost nobody supports the Clipboard. *WordPerfect*, *ProWrite*, *QuickWrite*, *TransWrite* - not a single one of these programs provides Clipboard support. *Notepad* does, although few people are likely to use *Notepad* for serious word processing, and a number of text editors do. Hopefully, software developers will begin to get serious about implementing standard OS features. Once they do, all of the tools we employ will become that much easier to use.

Harried writers
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Rogers's
Thesaurus.
Alternative
wording is but
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away.

ET, PORT HOME

Yes, Virginia, *ET* supports ARexx. The ARexx port supports 20 commands, giving you the ability to start and stop *ET* externally, as well as obtain synonyms, definitions, parts of speech, and other information. Not everybody has the ability - or the inclination - to program ARexx commands, though. Thankfully, the manual lists 13 ARexx examples, and manages to cover every command. ARexx commands can be sent from an external script or can be invoked through a macro within *ET*.

The *Electric Thesaurus* is a worthy companion for applications which don't have a thesaurus, thanks to its ARexx port and Clipboard support, and it works just fine as a stand-alone process. You never know when you might want to write something the old-fashioned way, with a pen. Just remember to do it near your Amiga, where the word that's on the tip of your tongue can be summoned with the tip of a finger.

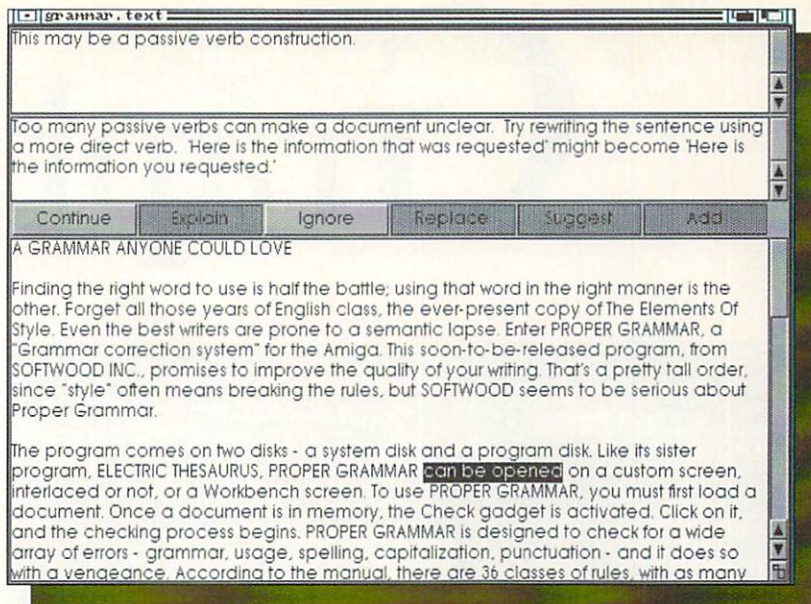
A GRAMMAR ANYONE COULD LOVE

Finding the right word to use is half the battle; using that word in the right manner is the other. Forget all those years of English class, or the ever-present copy of *The Elements Of Style*. Even the best writers are prone to a semantic lapse. Enter *Proper Grammar*, a "grammar correction system" for the Amiga. This program, from SoftWood, promises to improve the quality of your writing. That's a pretty tall order, since "style" often means breaking the rules, but SoftWood seems to be serious about *Proper Grammar*.

The program comes on two disks - a system disk and a program disk. Like its sister program, *Electric Thesaurus*, *Proper Grammar* can be opened on a custom screen, interlaced or not, or a Workbench screen. To use *Proper Grammar*, you must first load a document. Once a document is in memory, the Check gadget is activated. Click on it, and the checking process begins. *Proper Grammar* is designed to check for a wide array of errors - grammar, usage, spelling, capitalization, punctuation - and it does so with a vengeance. According to the manual, there are 36 classes of rules, with as many as 244 rules in a class. Anything that *Proper Grammar* considers an error will be flagged and displayed at the top of the display, with a full explanation of the type of error and suggestions for improvement.

PASS THE VERB AND FIX THE SPELLING

That last paragraph seemed reasonable to me, but *Proper Grammar* had a number of complaints. This sentence, in particular, caused a number of warnings: "Like its sister program, *Electric Thesaurus*, *Proper Grammar* can be opened on a custom screen, interlaced or not, or a Workbench screen." First, PG complained about the word "like," suggesting that I consider using "as" instead. Then it complained about passive verb construction in the phrase "Proper Grammar can be opened..." It didn't seem to believe that the sentence contained a main clause, either. I decided to rewrite the sentence to read "*Proper Grammar*, like its



Proper Grammar complains about a wimpy verb.

sister program, *Electric Thesaurus*, can be opened on a custom screen, interlaced or not, or a Workbench screen." That construction fared much better, with only a warning about the phrase "can be opened" constituting a passive verb construction.

When *Proper Grammar* finds an error, it gives you the opportunity to fix it. If it has provided an alternative, you can click on the Replace gadget. The offending text will be stripped, and the correction will take its place. *Proper Grammar* provides the familiar cut, copy, and paste tools to allow you to make alterations to your text. The Clipboard is fully supported, as is ARexx. *Proper Grammar*, then, is fully poised to cooperate with other Amiga programs.

THE STATISTICS, PLEASE

Proper Grammar also provides a full spate of statistics on your document. When you ask for statistics, you are provided with a count of the number of words, sentences, and paragraphs in your document, as well as the average number of sentences per paragraph, and the average number of syllables per word. Sentences are broken down into simple, complex, and passive. You are also given the number of simplex and complex verb and noun groups, as well as four different readability indexes.

The version of *Proper Grammar* I received was a pre-release beta. Although there were a few quirks in this version, it performed fairly well. The documentation is quite complete and readable, and the program has a slick, polished feel to it. The task of grammar checking is formidable, and it can't be left solely in the hands of a computer program. The program can only react to its own set of rules, can only make assumptions about the writer's intent. When used properly, a grammar checker can be a powerful tool. *Proper Grammar* has all the signs of being a great product.



Electric

Thesaurus

☆☆☆☆

\$99.95

Proper

Grammar

PREVIEW

\$99.95

Softwood

P.O. Box 50178

Phoenix, AZ

85076

800-247-8314

Brad Schenck on Graphics

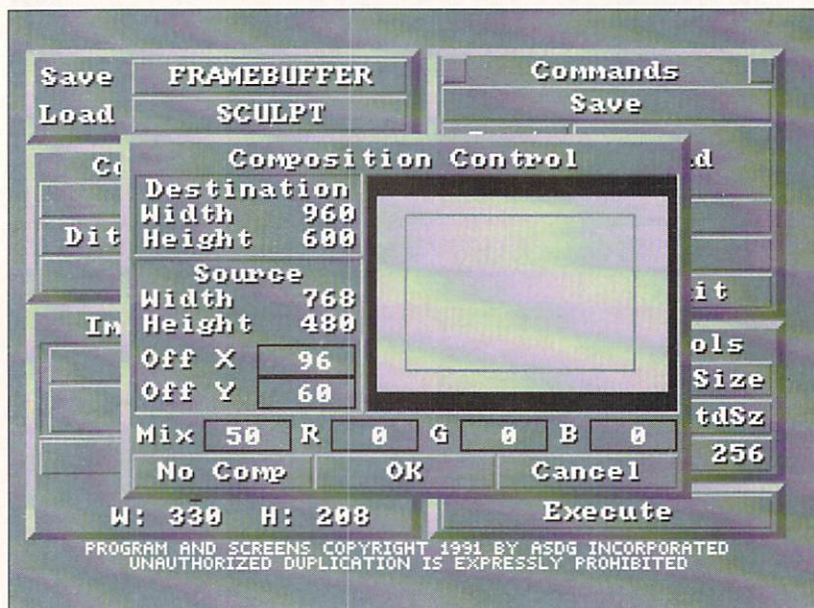


Figure 1. ADPro's interface, featuring its Composition Control requester.

Brad
explores the
capabilities of
ASDG's Art
Department
Professional,
including its
high-end
interface to the
Polaroid CI3000
film recorder.

ASDG's release of *The Art Department* impressed me very much last year. TAD is an image processing program with the ability to import many graphics file formats and convert them to IFF, using an expandable collection of loaders. In addition, it offers many image operators for editing and altering images. I observed when I reviewed the program in these pages [info #33] that TAD's only weak spots were that it could not also save files in all the formats it supported, and that there was no way to batch process files (such as animation frames).

The Art Department Professional (ADPro) is ASDG's new high-end offering, and it addresses both of those points as well as adding some very powerful and innovative features. We'll be exploring some of its capabilities this month, especially its interface to the Polaroid CI3000 film recorder. But first let's see what's new and different in ADPro.

MODULARITY

I should mention that the original *Art Department* is still available, and at a bargain price - \$89.95. Users who don't need all of ADPro's added features may still be quite satisfied with the entry level version.

ADPro carries on where TAD left off. Where TAD had modular 'Savers', ADPro now has modular

'Savers', 'Loaders', and 'Image Operators'. This means that users can purchase additional modules as they become available, and only those they need; not all of us are likely to need the CI3000 'Saver' module, for example, or Targa file compatibility.

Loaders and Savers do not always deal with files on disk. There's a Screen loader which can grab any screen displayed on your Amiga, including menus, and a Back-drop loader which allows the user to create a 24-bit screen from scratch in adjustable sizes, either solid or with up to four gradient colors. The *Framegrabber* loader will digitize directly from Progressive Peripherals and Software's *Framegrabber*. A *Ham-E* loader imports images from Black Belt Systems' *Ham-E* device.

Savers are equally flexible. A saver for Impulse's *Firecracker* 24-bit display board offers display of ADPro's 24-bit images directly from within the program, including the overlay of standard Amiga graphics. A similar module for the Mimetics *Framebuffer* displays the current image on that device. ASDG seems highly motivated to offer such support to other hardware display devices as they appear, wherever the manufacturers are willing to cooperate - this reinforces the product's byline: 'Image Processing's Common Ground'.

In addition to producing color separations, ADPro also offers a Postscript saver that produces ASCII or binary format Postscript files, EPS or non-EPS. The sequence of controls over Postscript output is remarkable.

PROCESSING AND FORMAT CONVERSION

All the same scaling and color controls are present, with some additions. Now that ADPro can save in numerous formats, including IBM/PC compatible VGA formats, there's an 'enhanced' palette setting which will use a 262,000 color 'pool' from which to choose the rendered image colors. This corresponds to the VGA and Mac II displays, which offer 256 onscreen colors from a potential palette of 262,000. Images rendered in Enhanced mode aren't viewable on a stock Amiga display, but can be saved to disk and then sent to the MS/DOS or Mac system they're intended for. I've been able to use this successfully to prepare work on the Amiga, touch it up in VGA on an MS/DOS system, and finally deliver it to a client for use on Macs.

New image operators include Crop Image (much like picking up a 24-bit brush from an image), Blurring and Filtering, Tiling (which makes a repeating pattern out of a portion of an image), Rectangle (which draws a filled or unfilled rectangle into ADPro's 24-bit image,

with or without variable transparency), Apply Map (which applies all current color balance settings to the 24-bit data), and Dynamic Range (this 'rescales' the values in the 24-bit image to a specified range, and is very useful in masking out colors outside the legal range for composite video without losing the relative balance of tones in an image).

Several of these interact with *ADPro's* compositing abilities. Image composition controls allow the user to 'paste' a 24-bit image into another one with variable transparency.

WORKING WITH ADPRO

Figure 1 shows the Compositing requester, in which the large white rectangle represents an existing image. A grey hollow rectangle within that places the new image on its background. With 'Mix' set at 50, fifty per cent of the color from the new image will be blended into the existing one. The zero values for Red, Green, and Blue indicate that any pure black in the new image will become completely transparent. This allows masking or stencilling to be performed on 24-bit data. In Figure 2, our illustration of the *Art Department* door, these features were used extensively.

In the case of the door image, the backdrop was first created from a couple of interesting fractal patterns which were Mixed together, flipped, recombined, and Tiled. The raytraced door was composited into this backdrop at a 100 per cent Mix, with no transparency. I used *ADPro* to create a dithered, high resolution 16-color version of this image which I then loaded into *Deluxe Paint III* in order to draw the border, decorative designs, and lettering for the image. These were done using a limited color palette for the moment.

I then used the Backdrop loader to create a 24-bit rectangle that shaded from orange to yellow, and applied my border mask to it. The result was a 24-bit shaded rectangular border. Next I created a similar mask in light and dark colors, painted to create the beveled highlights and shadows on the border. When this mask was applied to the image with a lower Mix value, the bevel shapes simply shaded those areas of the 24-bit border to lighter and darker shades on the bevel.

I combined the border and backdrop images and then applied the design and lettering masks in the same way; these created an embossed affect for the designs, and a sharper effect for the title lettering.

This entire process was performed in 24-bit color, but it wasn't necessary to have a 24-bit display board to do it. The image could be viewed at any time in Hold and Modify mode, or in 16-color high resolution with dithering, on a standard Amiga system. In fact, I never saw this picture in its full 24-bit version until I recorded it on film.

Obviously this compositing process isn't as direct as painting directly into a 24-bit image. It is quite powerful, though, and does offer 24-bit image creation even on systems without such a display. For publication, this is quite a workable system. Had I had a *Fire-cracker* board in my system, I could have been viewing the 24-bit image at every stage, of course.



Figure 2. The high-quality output produced by Polaroid's *CI3000* film recorder. (For quality and clarity, this picture was color separated from the actual film output by conventional, not desktop, processes.)

AREXX & ADVICE

Finally - and this is far from an in-depth appraisal - *ADPro* does allow batch processing through its ARExx interface, provided you have ARExx running in your system (this includes all Amiga 3000 owners; others will have to have purchased ARExx from its author, William S. Hawes). *ADPro's* ARExx interface offers complete control over the program and allows other programs to control *ADPro* as well. This makes practically anything possible, but requires ARExx programming (or PD and commercial ARExx programs) to implement. Many artists will still be waiting in vain for simple batch processing, but the potential is there. It just needs many small macros, or one comprehensive one, to make it a reality.

As I've said, this is only scratching the surface of *ADPro's* features. Modular savers and operators, the flexible nature of all its modules, and the compositing abilities of the program make it a practical necessity for Amiga artists. About the only way I can wrap it up neatly is to tell you to go buy it. I can't imagine that you'd regret that.

POLAROID CI3000 FILM RECORDER

A digital film recorder connects to a computer and accepts image data from the computer much as a printer does; but the output of the film recorder is photographic, whether slide, negative, transparency, or other types. Typically film recorders offer quite high

Continued on page 64...

CI3000

Film Recorder

☆☆☆☆☆

\$4500.00

Polaroid

575 Technology

Square,

Cambridge, MA

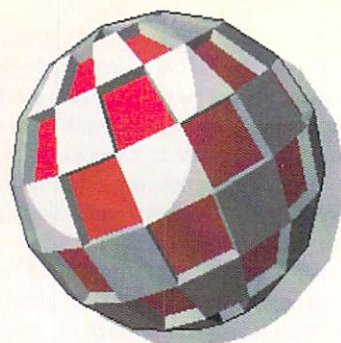
02139

617-577-2000

CyberPlay

by Tom Malcom

Incredible ★★★★★ Very Good ★★★★ Average ★★★ Poor ★★ Drek ★



After a brief dry spell, Amiga games have started flowing again. The quantity isn't what it was a couple of years ago, but numbers are encouraging. There's some hidden good news in the trend: game releases don't usually pick up until Summer CES. I expect to see a good number of new games there as well, so lube your joysticks and limber up your fingers. In the mean time, here's what I've been playing lately.

Hoverforce

★★★★★

Accolade, 550 South Winchester Blvd.
San Jose, CA 95128, 408-985-1700

One of the things I love about Amiga games is that some of them make Benn sick. He can play *Hoverforce* for about ten seconds before he starts turning green from motion sickness, which should give you some idea of what the game is like. Vector graphic games have never been among my favorites, but I can't leave this one alone. I have never seen a game that moves as fast and as smoothly as this one does. The object is to hunt down and destroy a bunch of nasty drug dealers, but they might as well be invading aliens. The plot is only secondary; the play is the thing.

The landscape of the game is a sort of Miami-esque mixture of water, land, and



Hoverforce, a speed and motion extravaganza from Accolade.

buildings through which you guide your Hoverkill 1000 "urban assault skimmer" at speeds that will leave you gasping for breath. The wonder of *Hoverforce* is that you can actually chase these bad guys through the streets and around buildings, anywhere you want to go, and it's all done in a perspective view; things get larger as you approach them and smaller as you move away. Other games have done this, of course, but never this fast. The landscape graphics don't have much detail, being little more than boxes, but the enemies that swarm around you do have enough to give them some per-

sonality. The music and sound effects - particularly the sound effects - are very good.

There are a few flaws with *Hoverforce*. The manual isn't much help in telling you what you need to know to play the game. It was obviously written by people who know the game so well they take for granted things that should be explained in detail. In fact, Accolade tells me that they're going to do a revision, most likely in the form of an addendum card. [Check the .info Update in coming issues for details.] I also don't think the game has the depth that it should have. It's divided into four sections, each of which has you doing battle with one drug lord, but you have to defeat him three times (when I kill something, I really prefer that it stays dead), thus making a total of 12 levels. My last complaint is that, true to the style of many arcade shoot-em-ups, there is no variation in the game; the enemies are always in the same places.

If you're immune to motion sickness, *Hoverforce* will give you some of the best mind-bending action you've ever had. Entertainment like this are why I don't care much for flight simulators; they move too slowly. I hope *Hoverforce* - which was designed by Paul Carruthers and Ian Downend, and programmed by Downend - is only the first of a series of games using this incredibly fast graphics engine. I'll be waiting impatiently for more and better from them.

Armour-Geddon, The Last Temptation of Flight Simulation.



Rotox

★★★★

US Gold/Accolade,

550 South Winchester Blvd.

San Jose, CA 95128, 408-985-1700

Rotox is yet another in the recent spate of games with motion as one of the key elements. This one is an abstract vector graphic stomach churning that has you jumping, riding, and walking across a series of moving platforms, walkways, and other objects. The mechanics of the game take the approach of leaving you stationary and moving the background around you as you change direction and move forward and back. It is very fast, and the effect is that, with the topdown view, you'll be reaching for the dramamine bottle in no time.

Rotox does have some imperfections. First and foremost, the disk-based copy protection is so intense that it creates booting problems. I've tried it on three different machines and had to make as many as 8 tries to get it to run, and even then it has crashed once in a while with an internal error message relating to unfound files. It also uses one of those dried-blood colored code sheets. Once you do get the game running, plan on being very frustrated while you learn how to navigate; a training mode would have been a welcome addition. Fortunately, getting back into play after being killed off is reasonably fast. The graphics are only simple shapes and the animation glitches a little now and then, but the end result is acceptable, given how fast things are moving. I also think the game relies a little too heavily on timing. Many of the platforms revolve or move in other ways, and you have to learn how to time running from one to the next so you don't fall off into the void. There is virtually no room for error and there are too many of them strung together in spots. Given this game's British origin, the high difficulty is to be expected.

If you can stick it out until you master the movement, *Rotox* offers some superior play and diabolical puzzles to figure out. Skill and daring are its two main requirements. I wouldn't recommend *Rotox* to beginning arcaders, but more seasoned joystick jockeys and fans of vector graphic games will certainly want to take it on.



Venturing into the weird in *Theme Park Mystery*.

Armour-Geddon

★★★★+

Psygnosis, 29 Saint Mary's Court
Brookline, MA 02146, 617-731-3553

Armour-Geddon can probably be considered the flight/tank/combat/strategy simulation to end all flight/tank/combat/strategy simulations. There are several things that set it apart from the crowd. The most notable is the Research & Development screen, where you can assign your scientific and manufacturing resources to the development of new weapons, all aimed at the destruction of a post-apocalyptic group of bad guys bent on using a beam cannon to obliterate all life (except their own, of course) on Earth. To do this, you have to find the five scattered pieces of an ancient neutron bomb, reassemble it, and use it to destroy the beam cannon. The diversity of vehicles is also something we haven't seen before, at least to this degree. Usually simulations only offer air or ground vehicles, but here you can pilot a helicopter, fighter plane, bomber, two types of tanks, or a skimmer. You can even have more than one of these vehicles going at once if you think you can handle them. (I gave up on that notion after about three seconds - there's just too much going on for these tired old reflexes to handle multiple weapons.)

The vector graphics are very fast (this seems to be the year of fast graphics; see the reviews of *Hoverforce* and *Rotox*, above) and there are more control options than you can shake a hot missile at. The graphics are,

of course, not as detailed as they are in non-vector games, but they're adequate to the task. One of the problems I have with the bulk of combat simulations is that they tend to become monotonous; *Armour-Geddon* doesn't. It has enough playability and variation that after a week, I'm still booting it up whenever I can spare a few minutes to play.

Theme Park Mystery

★★★★

Image Works/Konami

900 Deerfield Parkway

Buffalo Grove, IL 60089, 708-215-5100

This is the strangest game I've seen since *Weird Dreams* and *Fiendish Freddy*. A European import, it is set in theme park that must have been built by the Anti-Disney. You first play a couple of carnival-type games, a bagatelle and one of those little cranes with which you grab prizes. With what you win from the bagatelle, you buy cards from Zoltan, the fortune-telling machine. Once you get this far, you take a monorail to three arcade sections. The first is a standard, if rather dark-spirited, platforms and monsters game, the second a futuristic rollercoaster ride with weapons, and the third a dangerous chessgame that makes *Alice in Wonderland* look like a paradigm of normalcy. The crisp graphics are very well done, though the animation would have benefitted from a frame or two more per second. The sound effects are almost as strange as the premise, but perfectly apropos.

CyberPlay

Bill & Ted
meet
Beethoven and
Elvis and have
a few yuks.



The only major gripe I have with the game is that there is no save, or even continue, function. Once you're killed off in an arcade section, you have to start over from the beginning, a process that takes far too long. While that's typically European, I still think it's inconsiderate. The process of restarting wouldn't be so aggravating if it weren't for the fact that there are so many gratuitous animated sections that must be gone through every time. Entertaining and finely done as they are, some way to skip them would have been much appreciated.

Theme Park Mystery did hook me, but then I'm a fan of the weird and outre. While it's certainly not for everyone, it is well worth your time if you like the unusual.

Bill & Ted's Excellent Adventure

★★★★+

Capstone, 14160 SW 139th Ct.
Miami, FL 33186, 305-252-9040

Stupidness raised to an art form is the best description I can think of for this game, which is based on the movie of the same name. (I secretly believe that Bill & Ted are the reincarnations of Larry and Curly.) The aim is to help Bill and Ted travel through time and bring historical dudes back to the San Dimas Mall (like, where else?) in order to pass the history class they're currently failing. It's not quite as simple as that, since you have to run around collecting various objects in order to

get the dudes (and dudettes) to follow you.

The resulting arcade adventure is a funny, funny game, full of sight gags, bad puns, and boneheaded silliness. It doesn't have much depth, and the graphics could have been better done, but I just can't help liking it. Control is mostly joystick, and I think it's a little, like, bogus (too touchy) in spots, but some practice will help get you through it.

One of the side effects of Bill & Ted is that you'll learn a few tidbits about history while you play it. For the most part, it's historically accurate, even if it does take the lowbrow approach. But who cares about that? Play *Bill & Ted* for the silliness, something it has by the bushel.

Chuck Yeager's Advanced Flight Trainer 2.0

★★★

Electronic Arts, 1820 Gateway Drive
San Mateo, CA 94404, 415-571-7171

"18 aircraft with accurate aerodynamics and realistic 3-D modelled graphics... Unlimited camera angles... six race courses... join the Blue Angels or Thunderbirds... realistic terrain..."

The package notes sound pretty hot to flight-sim junkies like me, and many of us have been eagerly waiting these last four years for *AFT* to make it over from the PC to the Amiga where it could really shine. Unfortunately, the potential thrills of flying these fascinating craft are all but erased by extremely slow animation (and using an accelerator provided no noticeable benefit). Turning off most of the detail results in some improvement, but then what's the point? If the U.S. hardware used recently in Iraq had been this "advanced", the Dallas Cowboys Cheerleaders would all be wearing veils by Fall. Another apparent victim of IBM conversionitis, *AFT* is a big disappointment. - Benn Dunnington



Cadaver, from
the Bitmap
Brothers via
Spectrum
Holobyte.

Cadaver Preview

Mirrorsoft/Spectrum Holobyte Inc.

2061 Challenger Dr.,

Alameda, CA 94501, 415-522-3584

Jumping onto the Euro-Bandwagon, Spectrum Holobyte has formed an association with British game publisher Mirrorsoft and the resulting games will be released under a label called Arena Entertainment. *Cadaver* will be the first release and was actually developed by one of my favorite development teams, the Bitmap Brothers. Among other things, they were responsible for *Speedball* and *Xenon I & II*, some of the best arcade games ever. *Cadaver* is a beautifully drawn arcade adventure that uses a three-quarter isometric view. It's set in a castle, and there are over 350 rooms to explore and plenty of arcade action to keep you busy. The game permits movement in 8 directions has an automapping function. Look for *Cadaver* in the third quarter.

Sex Olympics

★★★★

Free Spirit, 58 Noble Street

Kutztown, PA 19530, 215-683-5609

Aimed at the hormonally overactive junior high mentality, *Sex Olympics* is racy, leering, and scantily clad, but not even close to pornographic. It will only be offensive to those humorless bluestockings like Jesse Helms who enjoy being offended by everything. In fact, *Sex Olympics* is most fun if taken as satire (which I'm certain is the intent). This is the third in Free Spirit's bawdy Brad Stallion series, and probably the best of the them. The galactic Sex Olympics are under way, and Brad must win the top honors for planet Earth. A dirty job, but I suppose someone has to do it.

The interface requires no typing at all, using instead a graphic icon strip that lets you interact with the game in all the usual ways, along with a couple of very unusual ones. Good taste demands that I say no more. The graphics and animation haven't improved much since Brad started, er, adventuring his way through the galaxy. The game is slightly different each time it's booted (objects in different places, etc.), giving it a little longer shelf-life. *Sex Olympics* is a lot more fun than



Quest for Glory II, more series-ware from Sierra.

it should be, mostly because it doesn't take itself seriously in the slightest. It's meant to make you laugh, and it does.

SimCity Graphics Sets Unrated

Maxis, Two Theatre Square, Suite 230
Orinda, CA 94563, 415-254-9700

If you've spent as much time with *SimCity* as I have, you've probably wished you could give your cities a different look. Well, now you can. Maxis has released two new sets of graphics. *Ancient Cities* contains cities in the styles of Ancient Asia (set in 1234 AD with a samurai theme), Medieval Times (1491, and it includes dragons and witches in the skies), and the Wild West (1849, with a Gold Rush theme). An odd mix, but fun. However, if the past doesn't interest you, *Future Cities* has graphics for Future USA (21st Century America), Future Europe, and a Moon Colony. All six sets of graphics are cleverly done, with appropriate substitutions for the nuke plants, electric lines, railroads, and the other period-specific game objects. I'm delighted that Maxis is still supporting one of the best computer entertainments ever done. Mandatory for *SimCity* owners.

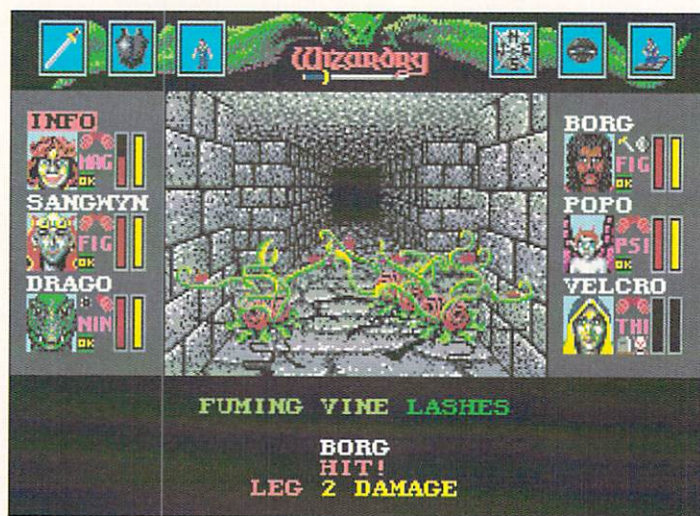
ON THE ADVENTURE FRONT

I'm getting more and more distressed with what's going on or, more accurately, what's not going on in adventure gaming these days. It seems to have sunk into an

endless repetition of Tolkien-ish fantasy and sequel after sequel. Sadly, it's gotten to the point where there's little to distinguish one adventure from another. There are a few notable standouts, like *Dungeon Master* and *Obitus*, but by and large, but they are few, infrequent, and usually show only technical innovation. What's really depressing about the situation is that we have the equipment and the skill to produce entertainments that can take us places and give us experiences we can't have any other way. What is lacking is imagination. Why are we stuck in the realm of Germanic/Celtic myth? There are many other civilizations and mythical worlds to explore. I think game designers need to start enlisting some first-rate talent from the ranks of professional novelists and scriptwriters, get them interested in the genre, and have them write specifically for the medium. Just as movies need writers, so do computer entertainments. The writer is the storyteller, someone who can make us want to know what happens next. It seems like adventure games are much more concerned with getting the player from Point A to Point B than with providing a cohesive, well-paced narrative. Adventure games have often been adapted from novels and movies, but the translations haven't been very successful because their stories weren't intended to be told in an interactive way. Imagine a story written specifically for the computer by Mark Twain. Why not base a game on Chinese mythology? The characters are no less

CyberPlay

Bane of the Cosmic Forge, Wizardry comes to Amiga.



interesting than Frodo and Gandalf and the stories aren't familiar to the point of predictability. Or how about an adventure that isn't based on mythology at all? Let's break adventure gaming out of its doldrums. Game designers: Dare to experiment, dare to be different!

Quest for Glory II: Trial by Fire

☆☆☆

Sierra On-Line, P.O. Box 485

Coarsegold, CA 93614, 209-683-6858

At least the setting of this game is Arabian rather than Tolkien. However, that's about the only out of the ordinary thing about this standard Sierra game. The biggest problem with it is that it seems padded. The first tasks you have to perform involve walking through the streets of a city, actually a maze that goes on about ten times too long. A map is provided, which is essential to finding your way, but the mazes themselves become tiresome very quickly. It wouldn't be so bad, but moving through them is exasperatingly slow, given the frequent disk accesses and molasses-like screen redraws and animation.

Still, if you're a fan of Sierra adventures, this one does have some charm. The characters have personality, even if their accents are a little incongruous (there's one Arab vendor whose speeches are written in a heavy Italian accent). I've always been a sucker for the Arabian Nights, and

I suppose that's the main reason I played this game as long as I did. It isn't anything special, but it's quite playable if you have the patience for it. By the way, the game comes on an incredible eight floppy disks, so playing from a hard drive is almost mandatory. It also runs just fine under AmigaDOS 2.0.

The Bard's Tale III: Thief of Fate

☆☆☆

Electronic Arts, 1820 Gateway Drive

San Mateo, CA 94404, 415-571-7171

'Thief of my time and my patience' is more to the point. This is a prime example of the stagnation in the adventure game genre. Skara Brae has yet again come under a Great Evil. Yawn. And you have to save it. Again. Yawn. The graphics are subpar even by IBM standards; as an example, the pictures that pop up for encounters are the same for several different creatures. Now, I know I'm supposed to willingly suspend my disbelief, just like in the theater, but couldn't the designers have added an extra disk (there are two in the box) and made them all different?

The one thing I dislike about all *Bard's Tale*-type games is that it seems to take forever to get anywhere. Far too much of my time is wasted doing battle every other step with some creature or another. I suspect encounters happen so frequently to make it seem like there's more to the game than there really is. As it is, the quantity of

encounters is simply distracting. Unless you're a fan of the series, don't bother.

Wizardry: Bane of the Cosmic Forge

☆☆☆

Sir-Tech, PO Box 245

Ogdensburg, NY 13669, 315-393-6633

Aside from a slightly different screen layout, there's not much difference between this and *Dungeon Master*, *Bard's Tale*, or twenty other FRPGs, for that matter. This latest chapter in *Wizardry* (And the first to be brought to the Amiga) comes on five disks and you'll certainly want to put it on your hard drive. As in *Bard's Tale III*, the encounters are far too frequent and take too much of my exploration time. One of the main functions of computers is to automate repetitive actions. In taking what is essentially a boardgame played with dice and computerizing it, you'd think the automation would make the game more playable. In fact, it's almost as tedious as playing with pencil and paper. I think it's because the game is too detailed and too much of that detail is left hanging out where the player has to see it. When played on paper, it's essential to know exactly where you are and where a monster is so the player can picture the scene in his imagination. But in *Bane*, as in most other games of its type, it's kind of pointless: I can see the monster on the screen. I would much rather have the computer take care of all the statistics without bothering me with them. I want to play the game, not ponder over tables of numbers and manage long, involved combat sequences.

The graphics are a little better than in *Bard's Tale*, but the choppy animation could stand some improvement.

I'm probably going to catch a lot of flak from die-hard FRPG fans over the two reviews above, but it's time to move on to something different. The *Bard's Tale* series (in fact, most all adventure game series) needs to be laid to rest; it's been milked dry. The *Wizardry* series has been popular for years, but it too has no new ideas to offer. Let's get on with something different.

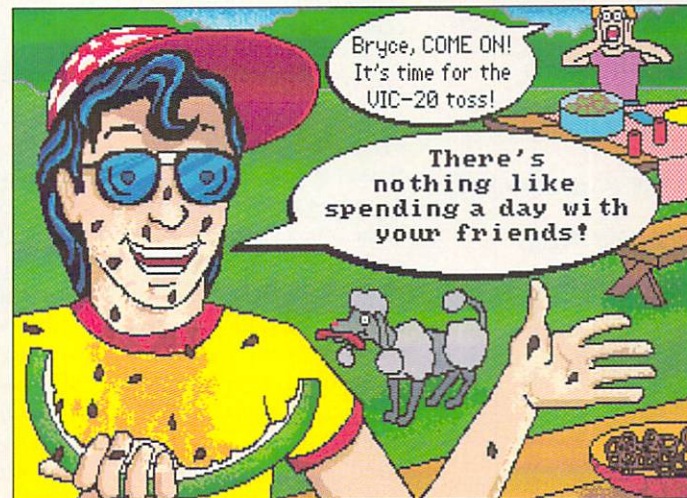
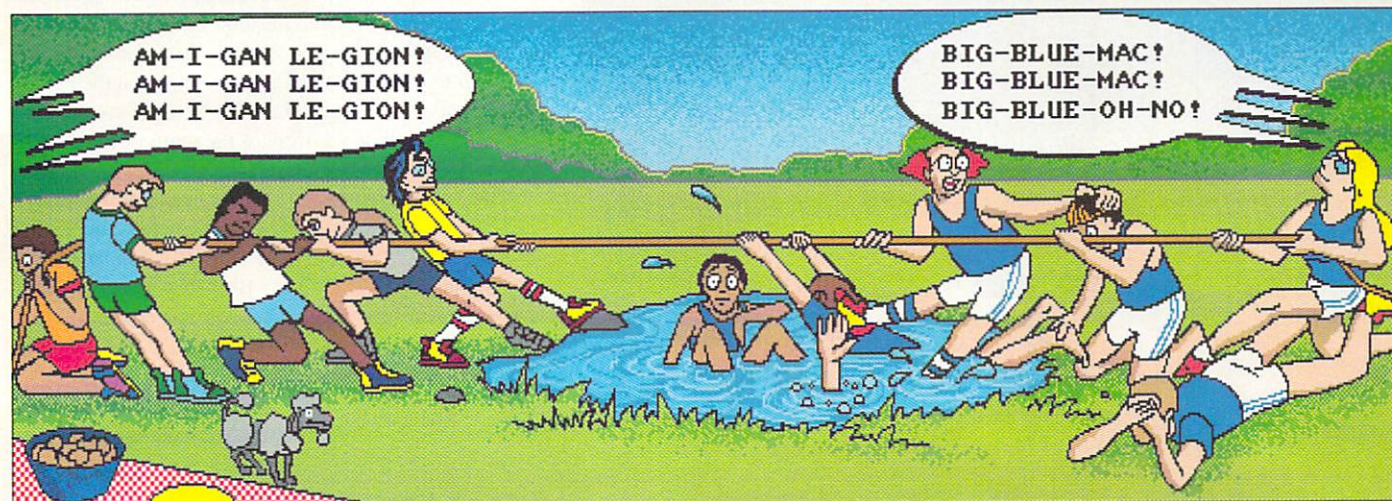
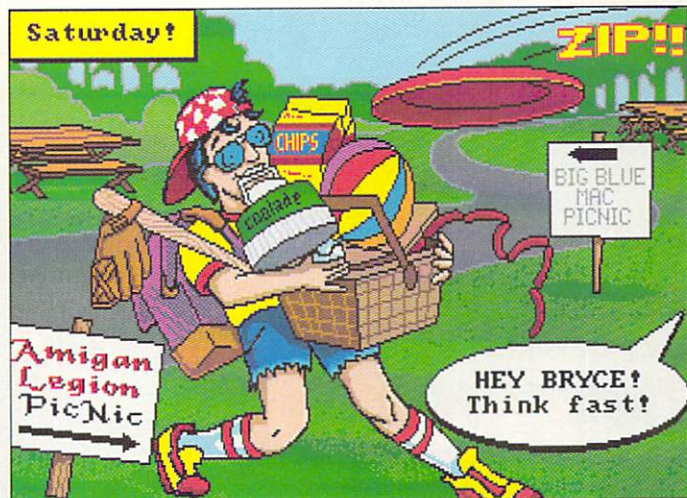
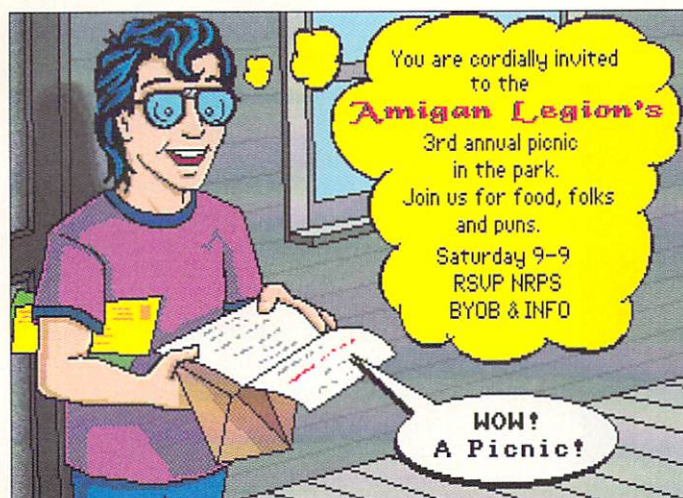




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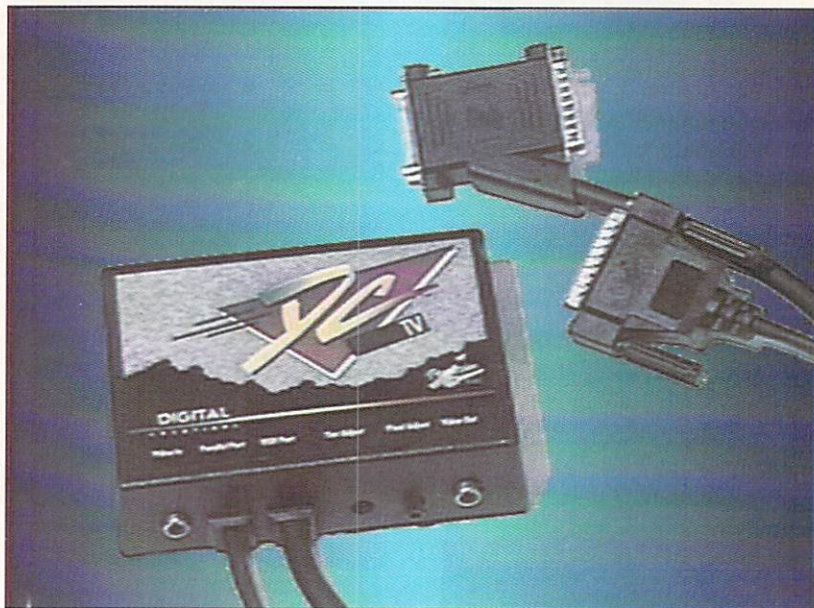
"THE PICNIC"

BY GREGORY CONLEY



Gregory Conley can be contacted by writing: Gregory Conley, 17320 Laverne Avenue, Cleveland, Ohio 44135

Oran J. Sands III on Video



The *DCTV* hardware, a self-portrait, rendered here as a 24-bit IFF image.

The video world is based on the concept of three color signals: the Red, Green, and Blue we're all so familiar with. However, the reality of video is the color composite video signal. One signal - not three - comprising literally *all* of the information a monitor needs to display an image. Understanding the nature and makeup of the color composite signal can lead to some interesting concepts. *DCTV* for instance.

DIGITAL COMPOSITE TELEVISION

DCTV (not to be confused with Commodore's *CDTV*) stands for 'Digital Composite TeleVision.' Instead of working with digital information by describing RGB images, *DCTV* uses a digitized form of the composite video signal. Although digital composite video is quite common in video devices such as DVE units, timebase correctors, and digital video recorders, few computer display devices use it. (NewTek's *Video Toaster* is one exception.) The beauty of this setup is that the composite video signal is inherently compressed information. A digital composite file can be much smaller than an RGB file describing the same image at the same resolution. Using this type of digital data opens doors that might otherwise remain shut.

It would be best to think of *DCTV* as an entirely new display system, not just a single product. This system offers digitizing, painting, and real-time animation, as well as full compatibility with *all* Amiga models. And it maintains a large measure of compatibility with Amiga files as well.

WHAT YOU GET

DCTV is supplied as a small black box with four disks of software. The *DCTV* box is attached to the Amiga externally via the RGB port, with the Amiga monitor connecting to the other side of the connector.

DCTV images can be viewed only on a composite video monitor, however. *DCTV*'s hardware doesn't have an RGB output like the Amiga's. *DCTV* graphics are composite video, and must be viewed on a composite video monitor. The standard Amiga monitor happens to have a composite video input on the back, and it works quite well for *DCTV*. You can simply use the input switch on the front of the monitor to select Amiga RGB or *DCTV* composite.

The concept behind *DCTV* is pretty slick. Keep in mind that each pixel on the Amiga screen is made up of three sets of data: one set for the Red, another for the Green, and a third for the Blue. If you are in 16-color hi-res mode, then each set of data contains four ($2^4 = 16$) bits of information. Combine all three sets of color data together, and you have twelve bits of data. Now, let's perform a 'mind experiment': assume that we want to use those twelve bits of data for something other than making an RGB screen display. Each pixel could represent a lot of information (2^{12} , or 4096 data 'states'); an entire screen's worth of pixels could contain tons of data (12 bits x 736 pixels x 480 scanlines = 4,239,360 bits [over half a megabyte]). If those twelve bits actually consisted of, say, digitized video data describing the brightness and color values of that particular point on the screen, then... well, you'd have *DCTV*!

FULL NTSC COLOR

When displayed in its 'uninterpreted' state on an Amiga monitor, a *DCTV* file looks like a mottled gray-green image. This same file when intercepted and translated by the *DCTV* hardware becomes a full-color screen image. In fact, that's the real wonder of this system: it offers a choice of colors that approaches that of high-end graphics workstations. I won't quote you a figure about how many colors it displays or the size of the palette, because it's almost impossible to do so. Counting colors is easily done on an RGB system

This issue,
Oran examines
the long-awaited
DCTV from
Digital
Creations.

where every bit changes the color value in a straightforward manner. In composite video, you can't quantify the exact number of colors available or displayable on-screen. There is no such on-off relationship from which to calculate the numbers. It would, however, be safe to say that there are several million colors available and displayable. The *DCTV* system advertises the capability to display the full NTSC color spectrum, and my tests show that's true. But that's still not the same thing as 24-bit RGB color. The two are apples and oranges. Don't get confused.

Digital Creations has made sure that all that color is put to good use. They have provided some excellent software. There is a paint program, a digitizing program, and a conversion module.

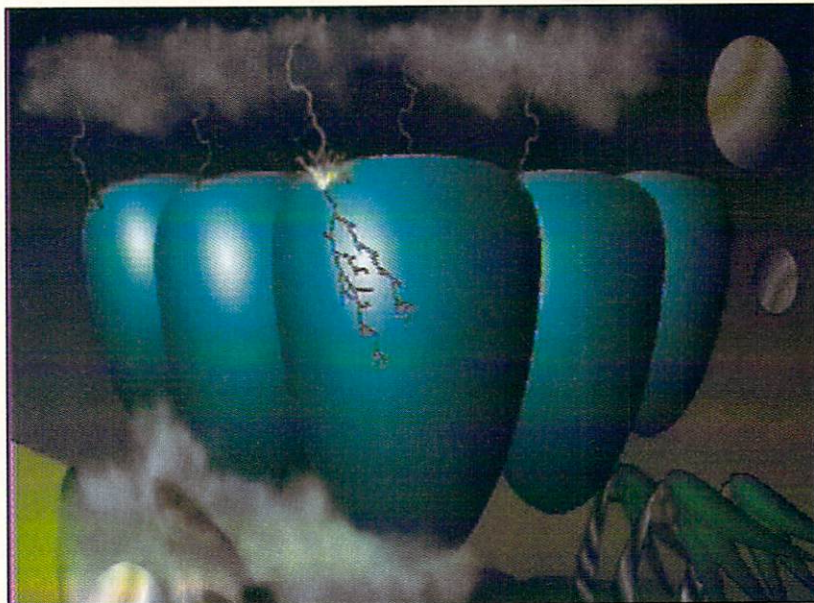
DCTV PAINT

The *DCTV Paint* software is incredible. Not since my days with 24-bit paint systems have I seen a paint program that offered such a "painterly" feel. You won't find yourself worrying about individual pixels, but using strokes of the brush just as an artist would. And though you're painting with millions of colors, you'll find this paint program is fast and capable, with no waiting for anything to render. Features like spare screens with rub-thru, true gradient fills, adjustable airbrush, and watercolor effect make this program a powerful tool. I'll leave a full review of the paint program to my fellow *.info* columnist Brad Schenck, but suffice it to say that in my opinion it represents a new level of graphic tools for the Amiga.

DIGITIZING

For those of us who need to import images from other sources, *DCTV* has got us covered. Digitizing is simple: you merely feed your color video signal from a camera, VCR, or laserdisc into the *DCTV* black box input. It slow-scans the video in six to ten seconds, providing a very true-to-source digitized copy. The image can then be manipulated with the paint program or converted to any form of Amiga IFF image file, including 24-bit. The file format *DCTV* uses can be converted to RGB and vice-versa, which opens up some interesting possibilities. Amiga users who produce 24-bit RGB files usually have no way to view them without expensive display hardware, unless they convert them to one of the Amiga's native display modes with an attendant loss in resolution and/or color. Since *DCTV*'s display approaches 24-bit RGB in its number of color choices, it makes a great system for previewing true 24-bit pictures. Animators should also take note: since *DCTV* files are identical in form to a 16-color hi-res image, you can load them into any Amiga animation-building program (such as *DPaint*) and assemble a real-time animation with the 'look and feel' of 24-bit color!

DCTV itself uses three file formats. The basis for all *DCTV* images are Raw files, which consist of 500K or so of data that comprises all the information needed to build the screen. What is actually displayed on the screen, however, is a Display file (about 100K). This Display file can be saved as well, and is in the form of a hi-res IFF screen. By necessity, this file doesn't con-



A colorful image created with *DCTV Paint*, reproduced here from a 24-bit IFF file.

tain quite the same depth of information as the Raw file, so it behooves the user to always save Raw files when working with images until the last step is completed. As mentioned earlier, *DCTV* will also save in 24-bit RGB, but be aware that there is no more information in it than there is in the Raw file to begin with. *DCTV* can display in several resolutions, the normal mode being 736x480.

OPINIONS

Perhaps the only potential drawback to *DCTV* is the video resolution of the output. It is lower than you might expect: it measures about 3.0MHz, roughly the resolution of a 3/4" recorder. However, given the anti-aliasing nature of the composite signal and the overly large color choices, the resolution won't be a big problem for most users. Digital Creations also tells me that there will be an upgrade sometime around August to the software which should increase the image sharpness. Registered users will be notified by mail. You should also be aware that some early *DCTV* units had problems working with Amiga A1000s, 1080 monitors, and 2002 monitors. A hardware fix was made to later units that solved this. Call Digital Creations if this seems to be a problem.

DCTV offers the budget-minded Amiga user a chance to work in extended color modes. It also makes a dandy digitizing setup for camcorder users. And, very importantly, it fills in the vast gap between HAM real-time animations and expensive 24-bit single-frame recorder setups. For the video producer, here is an inexpensive way to approach that 24-bit look, whether simply for roughing out images or producing a finished picture. Currently *DCTV* doesn't offer overlaying as a feature, but little elves tell me it's in the works, as is an animation program. *DCTV* is an extended graphics package worthy of your dollar.



DCTV

★★★★

\$495.00

Digital

Creations

2865 Sunrise

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Cordova, CA

95670,

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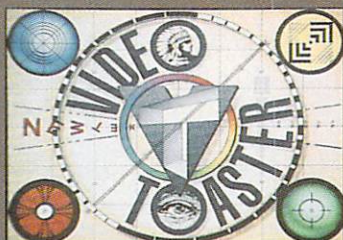
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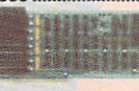
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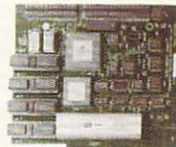
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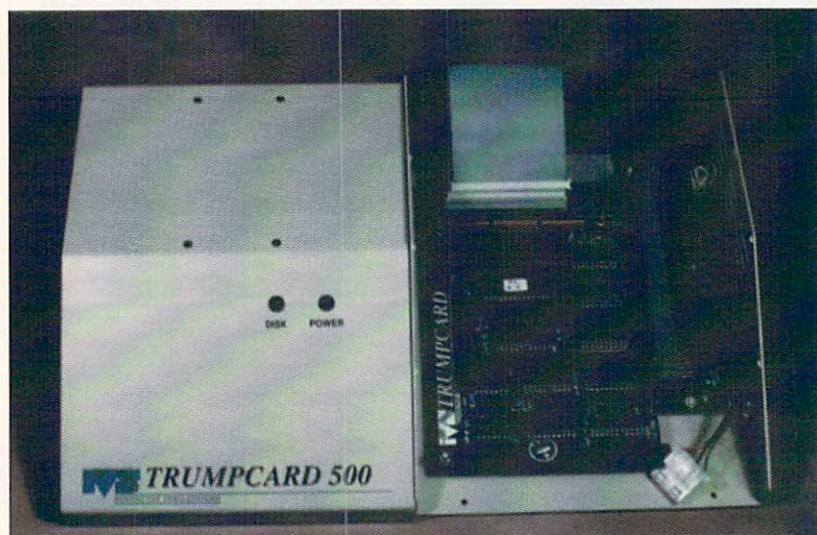
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Morton A. Kevelson on Hardware



Trumpcard 500 with Trumpcard installed.

TRUMPCARD 500

Interactive Video Systems' (IVS) *Trumpcard 500* is a sturdy aluminum enclosure that extends seven inches to the left of the Amiga 500. Its overall depth is nine inches and it attains a maximum height of 3 1/8 inches, which makes it just about 3/4" taller than the computer. The front of the enclosure slopes down to the same height as the keyboard. Green and red disk activity and power LEDs adorn the sloping front panel. The rear panel sports a five-pin DIN connector for an optional external power supply and a cutout with a plastic insert for an optional DB25 connector which is used for adding external SCSI devices.

Inside the *Trumpcard 500* is a two-slot A2000 expansion chassis. These 100-pin expansion slots can accept standard A2000 plug-in cards; however, the physical dimensions of the enclosure limit the system to half-length cards. The top of the enclosure has enough space to install a half-height 3 1/2 inch hard drive. Note that the hard drive mounts upside down inside the *Trumpcard*. Most hard drive manufacturers do not restrict inverted mounting; however, Seagate does not recommend it. According to an IVS spokesperson, Seagate's engineering department has indicated that some of the early Seagate drives had spindle bearing assemblies which were affected by inverted mounting. All of Seagate's current hard drives have symmetrical assemblies which can be installed either way.

A pair of jumpers on the expansion chassis lets you power the box from either the Amiga or the external power supply. You can probably get away with powering a single hard drive or a low power hard drive and two megabytes of RAM from the Amiga. If you expect to go beyond this, it would be prudent to invest in the external power supply.

IVS offers a choice of four half-length cards with which to fill the slots in the *Trumpcard 500*. *Trumpcard* is a SCSI host adaptor which can be installed in either the *Trumpcard 500* or in an Amiga 2000. On-board connectors are provided for a standard 50-conductor flat SCSI ribbon cable, and an optional 25-conductor cable to the DB25 connector for external SCSI devices. If you buy the *Trumpcard 500* without a hard drive, you will also get an eight-inch length of 50-conductor SCSI cable. An on-board jumper lets you select autobooting if you have Kickstart 1.3 or higher in ROM, or you can choose floppy disk booting if you are still living with Kickstart 1.2.

TCUtils 2.0, *Trumpcard*'s hard drive installation and

Starting with the 'big belly' RAM boards in issue #38, which were followed by the multislot expansion boxes in issue #40, I have been systematically exposing the possible ways of expanding the operational capacity of the Amiga 500. This time around I will examine 'outboard' expansion boxes for the Amiga 500. I was going to call these 'sidecars'; however, Commodore has already usurped this designation for the Amiga 1000 version of the Bridgeboard.

For our purposes, an Amiga 500 'outboard' is a limited-capacity expansion box that plugs into the Amiga's external expansion port. An 'outboard' is normally used to add a hard drive, additional memory, or both to your system. In this issue, I will be looking at the *Trumpcard 500* from Interactive Video Systems, *Supra Drive 500XP* and *Supra RAM 500RX* from Supra Corporation. In the future I will examine Xetec's *Fasttrak SCSI Host Adapter* and *FastRAM* for the A500, the *DataFlyer 500* from Expansion Systems, and *Impact Series II A500 HD* from Great Valley Products. I will then attempt to finish off this series by loading an Amiga 500 to the gills with every conceivable product from ICD. Specifically, I intend to cram an *AdRAM 540*, *AdRAM 560D*, *Flicker Free Video*, *AdSpeed* and a *Novia 20* hard drive system all into an Amiga 500's case!

Let's join
Mort as he
examines A500
SCSI/RAM
expansion
boxes from
IVS and Supra.

setup software, is the best that I have seen for any hard drive system with regard to ease of the initial setup as well as overall flexibility. Starting with a brand new hard drive, if you choose to accept the default option of a single partition *TCUtils* will handle the entire process of low-level formatting, AmigaDOS formatting, and installation of Workbench and AmigaDOS. If you wish to partition the hard drive, *TCUtils* offers a 'click-and-drag' graphical interface which makes partition sizing as painless as possible. You can choose either the old file system or the fast file system for AmigaDOS partitions, or you can create *AMax II* partitions. If you think you know what you are doing, *TCUtils* will also let you directly specify every conceivable user-settable hard drive parameter. The latest release of the *Trumpcard* driver fully supports Commodore's rigid disk block system.

TRUMPCARD PROFESSIONAL

If you are looking for faster performance, then *Trumpcard Professional* is a worthwhile option. *Trumpcard Professional* sports a pair of 50-pin SCSI connectors, autoboot jumpers, and SCSI ID jumpers. The latter let you change *Trumpcard Professional's* SCSI ID if you wish to use the system as part of a SCSI network with more than one host adaptor. Setting up a SCSI network lets you share SCSI peripherals with more than one computer. The present limitation of a SCSI network under AmigaDOS is that only one host system can be allowed to write to any single peripheral. Of course, shared reads are permissible.

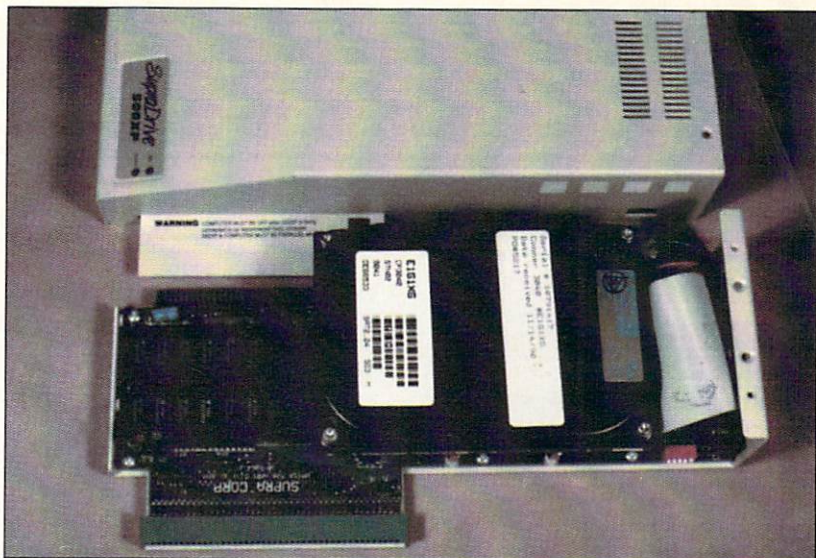
To let you add additional memory to the system, *IVS* offers *Meta 4*, an A2000 half-card which can add two or four megabytes of fast RAM using one megabyte SIMMs. *Meta 4* will work with either type of one-meg SIMM, as long as they are added in pairs.

Grand Slam, *IVS's* latest offering, is a *Trumpcard Professional* with an on-board parallel port and sockets for eight megabytes of SIMM-based RAM expansion. I have not worked with *Grand Slam* as of this writing; however, *IVS* was running a very impressive real-time video demo with a SCSI network using two *Grand Slams* at the New York Amiga World Expo.

Trumpcard 500 is a rugged, economical expansion system for the Amiga 500. I have been using a *Trumpcard* in my A2000 with a 48 megabyte Seagate ST157N for two years, and have recently added an 80 megabyte Seagate 1096N to the system. Keep in mind that if you decide to upgrade to an Amiga 2000, the half-length cards in the *Trumpcard 500* can be used in the new system.

SUPRA DRIVE 500XP

The *Supra Drive 500XP* is housed in an all-metal enclosure that is 11 1/2 inches deep and adds 4 1/4 inches to the width of the A500. When installed in the A500's expansion port, the box extends about 1 1/2" behind the computer. *Supra Drive 500's* profile closely matches the Amiga 500. Inside the enclosure is a SCSI host adapter with room for up to eight megabytes of fast RAM on-board. A 3 1/2" half-height hard drive is mounted on standoffs to the rear of the enclosure. The



Supra Drive 500XP with 2MB RAM.

system I received was equipped with a Conner 3040 40 megabyte low-power hard drive and two megabytes of RAM. This system was powered from the Amiga 500.

Supra Drive 500XP's back panel is equipped with a DB25 connector for external SCSI devices, a power connector for an optional external power supply, and a miniature 'game' toggle switch which disables the hard drive but leaves the fast RAM in service. At the rear, on the right side of the case, is a set of miniature DIP switches, which can be accessed without unplugging the *500XP* from the Amiga. Three of these are used to set the SCSI ID of the *Supra* host adapter. A fourth switch is used to enable or disable autobooting. The fifth switch disables the built-in fast RAM. Power supply jumpers for selection between the Amiga's power supply or the optional external power supply are located in the *500XP's* expansion port connector. These jumpers can be accessed without opening the case by simply pulling the unit out of the expansion slot. Overall, *Supra* has done an excellent job of making all the needed settings easily accessible to the end user.

The *500XP's* internal RAM can be configured as 512K, 1MB, 2MB, 4MB or 8MB. The 512K, 1MB, and 2MB configurations use one megabit chips of the 256Kx4 variety. An alternate 2MB configuration, as well as the the 4MB or 8MB configurations, are obtained by using four megabit chips of the 1MBx4 variety. All chips have to be in DIP packages. At the present time the four megabit chips are about twice the price of the equivalent amount of RAM using 1 megabit chips. Eventually, possibly by the end of this year, this situation will reverse itself. Note that you cannot mix the two varieties of RAM chips. If you start out with 1 megabit chips and wish to expand beyond 2MB, the smaller chips will have to be removed.

The *Supra Drive 500XP* has an Amiga 500 expansion bus pass-through which lets you hook up additional Amiga 500 expansion peripherals. In an effort to determine just how far I could go with this pass-

Trumpcard 500

With Trumpcard

☆☆☆☆

\$269.95

Trumpcard 500

With Trumpcard

Professional

☆☆☆☆+

\$279.95

Interactive

Video Systems



Yes, this setup works...even the Atari monitor on top.
No, this is not a Macintosh!

through, I plugged in a California Access *Bodega Bay* expansion box. The *Bodega Bay* had a Xetec *FastCard Plus* with four megabytes of RAM and a 40 megabyte Quantum hard drive installed. Using the game switch, I disabled the hard drive in the *500XP*, but I left its 2MB RAM in service. The system actually worked (see photo). My compliments to both Supra and California Access on the design of their Amiga 500 expansion port interfaces!

The setup utilities provided with the *Supra Drive 500XP* include *SupraFormat*, a full-screen icon-driven utility which is used to set up the drive from scratch. It automatically identifies and selects the parameters for any SCSI controller and hard drive on your system. *SupraFormat* also makes it easy to create as many as thirty partitions on the hard drive. The *SupraEdit* program, which greatly resembles *SupraFormat*, lets you access the lower-level hard drive parameters. The *SupraTools* disk also contains *CLImate*, Progressive Peripherals' icon-driven file management utility for any AmigaDOS trackdisk device. For data security, Supra includes *Express Copy*, a hard drive backup and file copying utility.

SUPRA RAM 500RX

Supra Ram 500RX is housed in a 9 1/2 inch deep, all-metal enclosure that plugs into the Amiga 500's expansion port. The enclosure adds only one inch to the width of the Amiga 500, and its profile closely matches the computer's. *500RX* lets you add up to eight megabytes of fast RAM to the Amiga. The RAM can be easily disabled with a miniature toggle switch located on the back panel. A connector for an optional power supply is also located on the back panel.

Using 256Kx4 ZIP dynamic RAM chips, you can add 512K, 1MB, or 2MB of fast RAM to the system. By switching to 1MBx4 ZIP chips you can add either 2MB, 4MB, or 8MB of fast RAM. More ZIP chips can be crowded on a circuit board because they stand on edge.

Like the *Supra Drive 500XP*, *Supra RAM 500RX* has a pass-through for the Amiga 500's expansion bus. Although I have not yet plugged the *Bodega Bay* into this pass through, I have run several less ostentatious peripherals without any problems.

All of the IVS and Supra products mentioned in this column performed quite satisfactorily. All demonstrated good design characteristics and proved easy to work with. I do not hesitate to soundly recommend them all.

ADDRESSES

Supra Corporation, 1133 Commercial Way
Albany, OR 97321, 503-967-9075

Interactive Video Systems, 7245 Garden Grove
Boulevard, Suite E, Garden Grove, CA 92641,
714-890-7040



CD-ROM UPDATE

I have found several more CD-ROM products that work with the Xetec CD-ROM drive:

✓ **Olivia De Berardinis' Exotica-ROM #1-1327** Mac & PC version, \$199, Educorp Computer Services, 7434 Trade St., San Diego, CA 92121, 619-536-9999

This disc contains 154 of the artist's images in 24-bit TIFF, color GIF, 8-bit gray RIF, GIF, and *MacPaint* image file formats - a total of 846 files and 250 megs of image data. The files can be accessed from AmigaDOS, and the images can be processed and displayed by ASDG's *Art Department* or *Art Department Professional*, as well as with Active Circuit's *RasterLink* (formerly *ImageLink*). The press sheet for this product says, in part: 'Olivia De Berardinis is an artist with a wonderfully deep, vibrant feeling for the feminine form.'

✓ **The Fred Fish Collection on CD-ROM Volume 1.1**, Jan 1991, \$69.95, HyperMedia Concepts, PO Box 85303, Racine, WI 53408, 414-632-3766.

This CD-ROM disc contains Fred Fish disks 1-410, the Gold Fish disks, and the Aquarium indexing and search program. Unlike the categorized disc included with the Xetec drive, this library is organized by Fish Disk number in its original form. A second copy of the library is provided with each disk as a single ZIP file for BBS use. Updates will be issued every four months at a cost of \$29.95 for registered owners.

✓ **Designer's Club on CD-ROM**, \$594, Dynamic Graphics, 6000 N. Forest Park Dr., PO Box 1901, Peoria, IL 61656, 800-255-8800.

This disc contains 517 Encapsulated PostScript clip art files organized in 13 directories. Each EPS file contains a bitmap representation of the image which can be used by some page layout programs, such as *PageStream*, for screen display.

See also this issue's New Products item on *ImageCELS* from Imagetects.

Supra Drive

500XP

☆☆☆☆

\$449.95

And Up

Supra Ram

500RX

☆☆☆☆☆

\$169.95 (1M)

\$279.95 (2M)

Supra

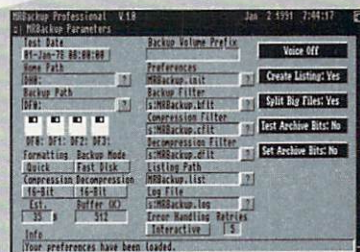
Corporation

RXTools

RXTools is an object oriented interface builder which extends the capabilities of ARexx and the Amiga. With the built in editor, RXTools provides a complete development system for ARexx on the Amiga.

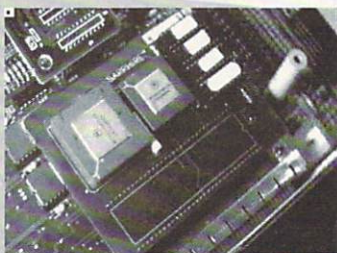
- ARexx function host environment system which runs in the background - ARexx Required.
- Allows you to create windows, gadgets, requesters and more within your ARexx applications.
- Provides a programming addition to ARexx not otherwise available.
- Built in editor allows easy manipulation of RXTools and ARexx scripts.
- AmigaDOS V1.3 and 2.0 Compatible.
- Retail Price \$54.95

MRBackup Professional



MRBackup Professional allows for easy yet powerful backup commands at the click of a gadget. MRBackup Professional will allow backups to floppy, another hard drive, virtual file, SCSI streaming tape, or even to DAT tape.

- SCSI Streaming Tape Capability - Use your existing controller and a SCSI tape drive, NO Extra hardware required (most controllers and SCSI drives supported).
- Utilizes full compression, (12 to 16 bit), to save backup space.
- With FastDisk option, even floppy backups take less time.
- Has full ARexx integration.
- Allows for complete external control of the backup options.
- AmigaDOS V1.3 V2.0 Compatible.
- Retail Price \$54.95, With Tanberg 150Mb SCSI Streaming Tape External \$949.95 Internal \$749.95, Wangtek 150Mb SCSI Streaming Tape External \$999.95 Internal 799.95, Sony full height DAT External \$2049.95 Internal \$1849.95.



Sapphire Accelerator 68020 / 68881

Fits snugly in an Amiga 1000, 500, and 2000
For easy installation, included is a disk with instructions, pictures and some public domain benchmark software. Also included is an electrostatic discharge (ESD)

information card, and an ESD safety strap. Features include:

- Factory Installed 12 MHz 68020 CPU And 68881 FPU 32 Bit Processors operating at 7.16 MHz.
- Speed Increases Of Up To 2.4 Times Faster In Integer, And 3.2 Times Faster In Floating Point.
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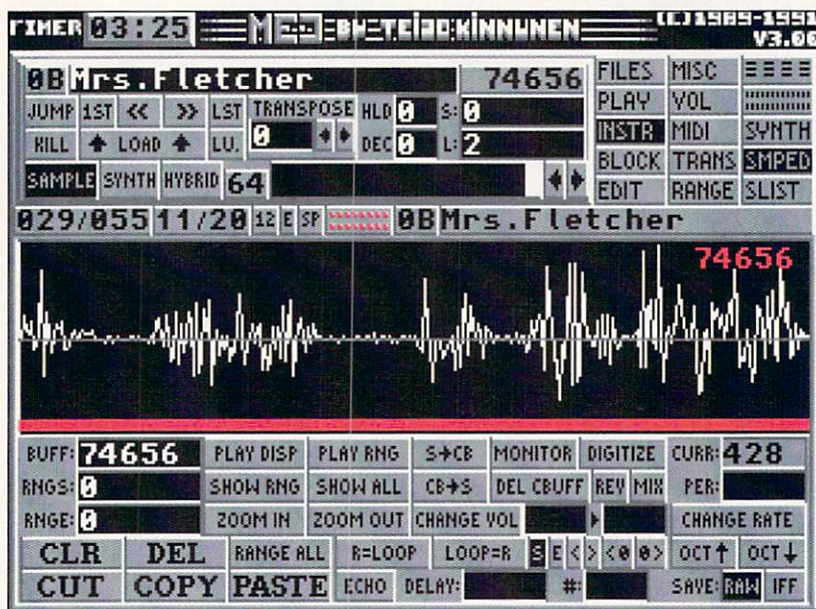
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THE COMPUTER INSIDE US ALL

Bix support under TTR.Support

on



v3.0 of *MED* displays a sampled sound waveform.

MED V3.10 by Teijo Kinnunen of Finland is at a point in its evolution that I can recommend it - with qualification - as a general music composition program. *MED* (an acronym for 'Music E^Ditor') is freely distributable and widely available on information networks and electronic bulletin boards. If you go looking for it, make certain you get version 3.0 or higher as it is substantially enhanced over previous releases, offering goodies like multitasking, use of 63 instruments per song and full MIDI compatibility with velocity control.

MED starts from the Workbench icon provided with it or a Shell/CLI, and includes over 100K of instructions in extensive - if less than perfectly organized - files that you can dump to your printer. Altogether, it fills an entire disk and includes such things as *MED V3.1* itself, a separate, tiny player program, 40 instruments, sample songs, and programmers tools and information.

TRADE-OFFS

This sounds good, and it is, but *MED* extends the tradition of the *SoundTracker/NoiseTracker (ST/NT)* genre. These music utilities began as freely distributable tools designed for entering music to be

added as background processes to games. *MED* plays these *ST/NT* songs, many of which are the reverse of that process, consisting of files called modules (music and instruments saved in one large file) that have usually been "ripped" from demos or commercial European games.

Although *MED* now has many more features and is easier to use than *ST/NT*, none of them incorporates standard music notation. *MED*'s scores are symbolized with letters and numbers that translate into notes, durations, and instructions for manipulating internally-generated sounds as they play. This obscurity is a major disadvantage and, in fact, renders *MED* (like *ST/NT*) inaccessible to the vast majority of people.

The trade-off, however, is that *MED* rewards musicians of sufficient tenacity with the most astounding music you ever heard a PC make. It plays rich bass lines and hot percussion licks, full, sliding harmonic leads with chorused digitized voices; even sound effects like thunder, rain, and haunting footsteps are not uncommon. Music produced by *MED* renders standard IFF tunes (ala *DMCS*) super-simplistic by comparison, and puts even *Sonix* RFF instruments and timing to shame. In fact, if you're used to those, this music will blow you away!

MORE CONTROL

The reason for this superior output is that *MED* offers more control over timing, special effects, and instruments than do its easier-to-use commercial counterparts. Its list of tricks for generating and modifying sounds is more extensive than *Sonix*'s, although, again, it's harder to use. With *MED*, you can add arpeggio, portamento, and vibrato to your instruments, make them slide up or down in pitch, and control the decay of sounds.

MED plays four kinds of instruments (three generated internally) and permits using up to 63 of them (memory permitting) in any one song. These instruments include:

1. Samples which, as you probably know, are digital reproductions of real world sounds such as music instruments and sound effects. *MED* plays both standard IFF 8SVX (3- or 5-octave) and raw samples, and permits saving either type to disk as the other type. (This can be a problem with *ST/NT* as they play raw samples, and won't load *DMCS/Sonix* instruments.) *MED* also lets you record and tweak samples if you have the necessary hardware, such as *PerfectSound* from SunRize.
2. Synthesized Sounds, which are Amiga-generated

This time,
we tracked
down Peggy
as she entered
MED school.

instruments and effects based on mathematical computations. These 5-octave sounds require scant memory and are comparatively simple, yet often very interesting when designed well and played with other types. *MED* incorporates five preset waveforms: sinewave, pulse, random, triangle, and sawtooth up and down, which you can mix and alter by messing with their onscreen sound wave representations with the mouse, among other ways. You can also draw them freehand.

3. Hybrid Sounds are combined sampled and synthesized sounds. There's a programming language in *MED*'s sound editor for combining sounds and controlling things like waveform, arpeggio, volume, pitch, vibrato, etc. It can be used to combine sampled and synthesized sounds, if you can handle base-16 hexadecimal numbers. (If you understand at least some of the complexities of music in general, you can easily learn hexadecimal.)

It also has editing tools to cut, copy, paste, double or reverse a range of notes, along with stretch, volume change, and smoothing transformations between different types of waveforms. You can accomplish lots of other musically interesting things with it as well, like transposing samples by half steps and replacing all the Cs in a score with C#s.

4. MIDI Instruments, which are generated by external music synthesizers connected to your Amiga's serial port through a hardware MIDI interface, can be played right along with internally-generated sounds. *MED* syncs externally or sends MIDI-sync pulses, and has MIDI In/Out support for up to 16 tracks. It offers options to read the volume when you enter notes from a velocity-sensitive MIDI keyboard, and gadgets for getting modulation wheel, pan, preset and hold pedal input.

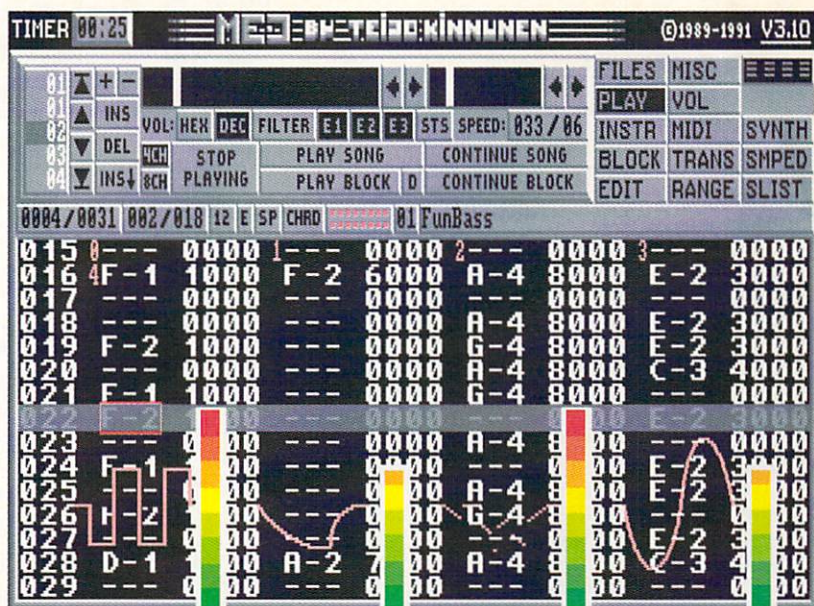
HOW IT WORKS

You enter music in *MED* by playing on a MIDI keyboard or, alternately, on the Amiga's ASCII keyboard, which is set up with two tiers of black & white keys like a piano. This makes about 2.5 octaves readily available, but the range can be shifted easily up or down with the press of a function key.

MED's songs consist of blocks, each containing from 1 to 256 lines of music. You can have up to 100 blocks per song, and they can be played in any order, any number of times, producing extremely long scores.

The bottom two-thirds of *MED*'s screen holds its sound editing and waveform screens; you can switch these with two different note displays when the music plays, one which scrolls vertically, the other horizontally. At the top right of this screen are 10 gadgets you point and click on with the mouse to change the bottom display, as well as the panels shown to the left. *MED* does not have pull-down menus, but it does have plentiful keyboard controls. While I don't find this arrangement particularly intuitive, with a bit of experience it is definitely manageable.

MED's primary play-back screen makes it a fascinating demonstration program, too. There's no standard notation, but interesting things happen on-screen, each of which can be switched on and off indepen-



MED 3.10 in play mode, with 4-channel 'scope and simulated LED bargraph display.

dently: The score scrolls vertically and the cursor jumps in rhythm with the music; each of the four columns representing the Amiga's sound channels contains a brightly colored animated sprite that represents graphic equalizers - these dance up and down on the screen, reflecting the volume passing through that channel; the waveforms, as they currently sound, are displayed near the bottom of each column as well. *MED*'s screen colors are changeable, it multitasks with Workbench 1.3 or 2.0 (although like all music programs, it hogs the CPU) and has low-pass filter control for all models but the A1000.

PLAYING AROUND

MED is not for the fainthearted musician, but even if you never consider entering music with it, it's definitely worth having just to play the wonderful *ST/NT* modules available on networks and BBSs. Here's a selection of modules from which to choose. Those marked with an asterisk are real aural candy, guaranteed to sweeten your ears.

*Axel F, Let's Party, BackPopped, *Message Falling, Bach Preludes, Noise1989-5, Bigonia, Paradox1, Bourbon Street II, Push (Maxi_Remix), Cebit-90, Ragtime, *Chicago, *Rainy Night, Cyber, *Solo-drum, Cycledelic, Space Travelling, *Desperado 2001, Stardust, Hallucinations, Train Beat2, Ingame, *UAI.T

MED Version 3.1

By Teijo Kinnunen of Finland

Freely distributable

Fred Fish disk: #483

PLink/AmigaZone: #28,010

GEnie/Starship Amiga:

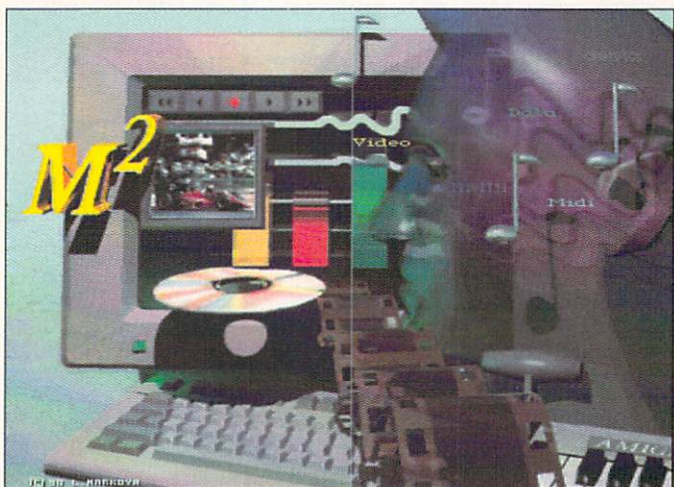
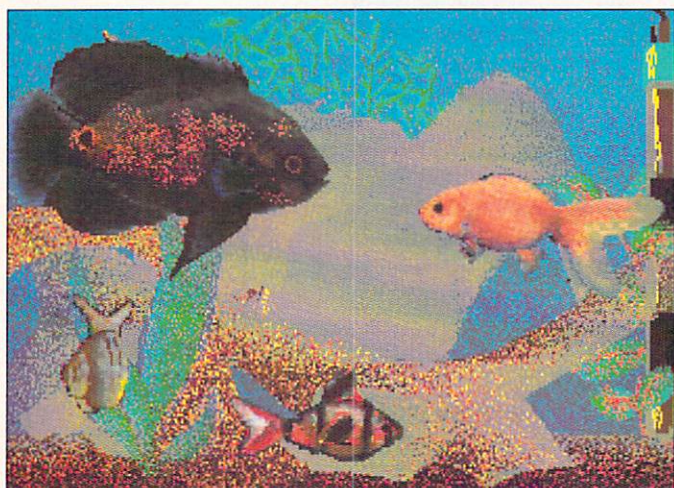
11048 & 11049 [v3.0]

CompuServe/Amiga Arts Forum:

MED30.LZH [v3.0]

MED is not
for the
fainthearted
musician,
but it's
definitely
worth
having.

PUBLIC DOMAIN



AMERICAN PEOPLE/LINK

The Amiga Zone and Amiga Zone PRO are American People/Link's Amiga support areas. Each file is listed with its library file number and is tagged either "AZ" or "AZPRO" to indicate in which Zone you'll find it. For information on getting your own People/Link account, call 1-800-524-0100 (voice) or 1-800-826-8855 (modem).

ANTILEM1 [27,759/AZ]

ANTILEM2 [27,760/AZ]

Eric Schwartz is an artist of prodigious talent who has been cranking out *MovieSetter*-based masterpieces for some time. You're probably seen some of his hysterical "AnimToons" already. *Anti-Lemmin's* is Schwartz's self-described finest work to date. You *must* see this hilarious piece of inventive animation if you've played Psygnosis's five-star-rated game *Lemmings*. A guaranteed crowd-pleaser, this is the perfect demo to liven up your user group meetings or get-togethers. (This composite screen shows Leona Lemmin' eyeing two *Anti-Lemmin'* frames.) Three megs RAM required and hard drive preferable.

FISHTANK.LZH [27,211/AZ]

Not to be confused with the BADGE killer demo of the same name, this is a lifelike aquarium simulator by Harriet Lurie of the University of Chicago's Department of Art. It's tranquil fun just to watch the fish swimming around the full-sized screen (shown). It's utilitarian, too, since you control water pH, temperature, and the tank's population. This lets you realistically prototype an aquarium you intend to buy or build for your own home.

CROSS.LZH [27,383/AZ]

It often seems like the some obvious computer applications take years to show up. This is a program that creates crossword puzzles in any language and then formats and dumps them to your printer. It allows lots of parameters: you choose the size and complexity of the puzzle, and use the supplied sets of words or insert your own or build a new word database from any ASCII text file. The working screen isn't much to look at, but it's the final printout you're after anyway. Coded in M2Amiga Modula-2 by Jurgen Weinelt.

M2=AMIGA.LZH [27,586/AZ]

It's time again to pay honor to one of the most visionary artists working in Amiga 3D today: Louis Markoya. Louis, who was apprenticed to Salvador Dali for a number of years, took Second Place Runner Up prize in *AVVideo* magazine's recent Amiga Graphics contest with this creation (shown). After seeing the other finalists' entries, I'd have voted him the top prize. The contest's premise was to capture the concept and spirit of multimedia in a static screen. Markoya's amazing rendering does this flawlessly. This HAM version is really just a hint of what the full 24-bit file looks like.

- Harv Laser [CBM*HARV]

PUBLIC DOMAIN

GENIE

Genie is General Electric's commercial online information service. GENIE's *StarshipAmiga* software library has over 10,000 files available for downloading. For information on signing up for GENIE, call 800-638-9636.

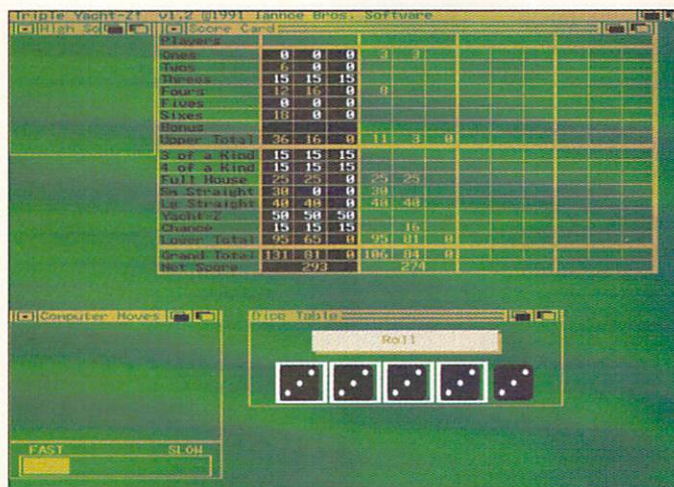
SEALANCE.LZH [10877]

If you've been wondering about those high-priced sub simulations and whether they'd be your cup of tea, try Jason Bauer's shareware (\$15) *SeaLance* (shown) first. This pre-registration version has a few rough edges (like sinking my Amiga upon exiting) but *SeaLance* is an engaging game and an incredible effort to have come from one student programmer. Full save and reload features will get you through your real-time, around-the-world, 20-target, 32-day mission (time scaling to 1:16 is available) at your own convenience.



TRIPLEYAHTZ.LZH [10927]

TripleYahtz (shown) is the most playable and enjoyable Amiga version of 'Yahtzee' yet. It features great sound effects, reasonable graphics that don't hog memory or slow things down, and the option of multiple players and/or play against the computer. Kudos to Stephen Iannce for this donation-ware offering.



WFM.LZH [10752]

Wheeling for Millions (shown) by Gary Holland is a pick six (or seven) lottery number generator and analyzer that supports your favorite "wheeling" strategy. This cripple-ware version only allows 25 entries per list of winning numbers for analysis. It didn't work a lick for me against the Indiana and Lotto America winning numbers, but who knows? Maybe next week, eh? [Remember that .info does not endorse any lotto picking program or strategy. -Ed.]

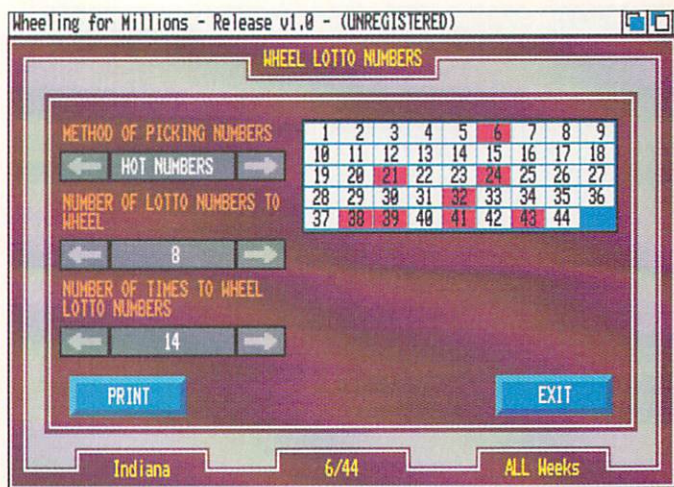
TRACKSALVAGE_V131.LZH [10778]

So what is the most dreaded Amiga disk drive sound effect? The incessant click of an empty drive? No. Its the obscene "Grooonk!-Grooonk!" of an unreadable disk track. And if its track 40, your disk could end up Lazarus-ized with lots of files dead so that the disk might live. Enter *TrackSalvage v1.31*! The AmigaDOS TrackDisk device has at least three bugs, according to *TrackSalvage* author D. W. Reisig, and lacks endearing features. *TrackSalvage* patches and extends TrackDisk in RAM and offers several user selectable options. And I was beginning to think my alignment tester was telling fibs!


MEGAD.LZH [10819]

MegaD is a shareware (\$15) 'kitchen sink' directory utility (DU) which touts the unique ability to display more than two directories on-screen at once, along with a nice copy/format utility and expansive printing features. (Labels, anyone?) It's great fun if you have a hard drive and love to play with window gadgets...a lot. Registration with author John L. Jones gets you four versions of *MegaD*, three with smaller kitchen sinks to conserve memory.

- Don Romero



Elements 2-3 | CiliySS Paul Miller - All Rights Reserved.

GROUP		[A] Ag Silver [P#7 N#68 E#47]																				
		Atomic Weight: 107.867996 Molecular Formula: SOLID																				
		Electron Configuration: [Kr]4d ¹⁰ 5s ¹																				
		Oxidation States: 1																				
		Boiling Point: 2436.0°C (2163.0°F)																				
		Melting Point: 1234.8°C (961.8°F)																				
		Density at 388K (g/cm³): 10.5																				
		Covalent Radius (Å): 1.34																				
		Atomic Radius (Å): 1.75																				
		Atomic Volume (cm³/mol): 10.3																				
		First Ionization Potential: 7.57eV																				
		Specific Heat Capacity (J/gK): 0.235																				
		Electronegativity: 1.93																				
		Heat of Vaporization (kJ/mol): 256.508802																				
		Heat of Fusion (kJ/mol): 11.9																				
		Electrical Conductivity (10⁸ Ω⁻¹cm): 0.690																				
		Thermal Conductivity (W/mK): 4.29																				
																						
		Crystal Structure: Cubic, FCC																				
I	H																	He				
II	Li	Be															B	C	N	O	F	Ne
III	Na	Mg															Al	Si	P	S	Cl	Ar
IV	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr				
V	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Au	Hg	Cd	In	Sn	Sb	Te	I	Xe			
	Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn				
VII	Fr	Ra	Ac	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr							

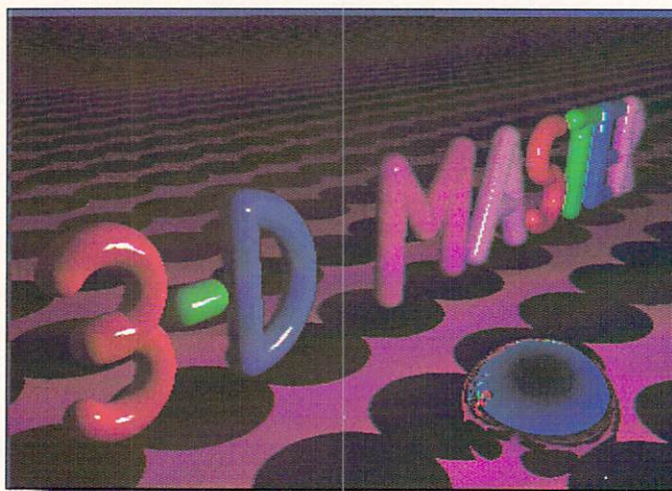
DISK COLLECTIONS

DEVWARE

Since we last wrote about DevWare, they've added many more nice packages to their already extensive catalog (\$2.50 on disk). They have also moved from La Jolla to Poway, CA. If you're in the area, they encourage you to drop in.

DEVDISK 052/SCIENTIFIC

Elements (shown), by Paul Miller, is a reference tool chemistry students will love. It provides the periodic table, but also adds extensive information on any element with just a mouse click. A "test" mode will quiz you on basic facts. The correct information is displayed when you hit return, even if you gave no answer at all. This is a wonderful tool, and I wish I'd had it while I struggled through chemistry. Highly recommended for high school and college science students. Now runs under 2.0. Also on this disk: scientific plotting and FFT routines.



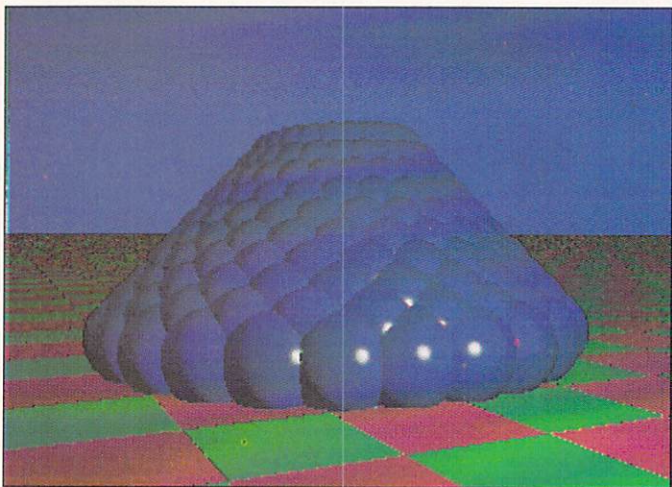
WBDISK 55/APPLICATIONS

One of the simplest programs on this disk is among the most useful. *MagMan* is a database designed for people who read many magazines. I use it to catalog programs reviewed by *.info*. The keyword field scrolls so you can enter more than the field size would indicate.

XCOPYIII is fast (1:16), and will copy to multiple drives. Other features include a fast format routine, disk eraser, nibble copier, etc. Jim Butterfield's useful *RoadRoute* is also included on this disk, as is *Anti-Flick*, which will tame your interface Workbench screen, and *Diary*, which will aid in preserving those magic moments.

WBDISK 080/RAYTRACER

3D Master is a commercial quality program, available here in its shareware version. There are no docs, but the package is menu-driven, and you can probably figure it out. Registration will get you docs and a copy without the annoying "send money" window which appears with nearly every command. It's a bargain. (Two sample pics shown.)



WBDISK 026/DISK UTILITIES #2

LabelPrinter is one of the most complete disk logging/printing utilities around. When you have hundreds of PD disks, you appreciate a package like this. Many options are available, including printing directory names in a different typeface from files. Two hard drive backup programs are here, as well as *CheckFit*, which determines if a file you wish to copy will fit on the target disk before you try to copy it. *File-Master* is a file-oriented sector editor, with an elegant interface. It gives you the choice of editing on the disk itself or in RAM.

HOW TO ORDER

1-9 disks, \$5.95/ea; 10-24 disks, \$4.95/ea; *Anti-Virus* free with orders for 15+ disks; 25+ disks, \$3.95/ea. Shipping: US, free; Canada & Mexico: Add .15/disk; Other foreign add .50/disk. VISA & Mastercard accepted, \$20.00 minimum. CA residents add 7.25% sales tax. DeVWare, 12528 Kirkham Court, Suite 11-IN, Poway, CA 92064. 800-879-0759 (Orders only), 619-679-2825 (Support & questions), 619-679-2887 (FAX)
- Jeff Lowenthal

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GAMES

- ☐ #139-WARGAMES: Two excellent games that will keep you occupied for hours on end. SEALANCE - a great submarine simulator up to par with "Silent Service" and "Attack 668". AIR ACE 2 - Patrol the skies and keep your trigger finger ready.
- ☐ #404-GAMEHINTS2: Hints, cheats, and maps for "Chaos Strikes Back" plus many more tips and tricks for all your other favorites.
- ☐ #027-MINDGAMES: TREKTRIVIA - Mouse driven Star Trek trivia game. 250K of digitized music. Selectable skill level and cheat mode. CHINACHALLENGE - Similar to Shanghai. BLACKBOX - 8x8 grid with several atoms that are hidden. Use your ray projector to find them. HANGMAN, NAMEGAME, more.
- ☐ #028-STRATEGIC: EMPIRE (v2.1) - Multiplayer game of politics, war & economics. This game goes in depth and can last for months. Has a modem option for remote play.
- ☐ #029-BOARD & STRATEGY: BULLRUN - Choose the Northern Union Army or the Southern Confederate Army and refight this historic battle. CONQUEST - Set up colonies and fight interstellar battles to keep your territory or invade others. CLUE - A nicely done Clue board game.
- ☐ #136-BATMAN: You (as Batman) are out for a late night spin in the Bat Jet (newly rebuilt) when you notice the streets of Gotham have been overrun by the Joker's men. Activate your twin mini-guns and proceed to wreak havoc. But beware of the Joker. MANIA - A Rambo type game set in Iraq. Destroy tanks, jets, oil wells, and free the hostages in this non-stop action game. Many more arcade type games included.

HOME & BUSINESS APPLICATIONS

- ☐ #019-MISC1: NAG - A very useful calendar and appointment program that runs in the background and alerts you for any upcoming event. MEMOPAD - Another useful tool for the forgetful. LOTTO - A random number picker. PCBTOL - For circuit board designing. Also on this disk are several interesting programs written in basic.
- ☐ #152-HOME APPLICATIONS: GROCERY LIST - Great helper prints out a grocery list with item name, location, and price. AUTOGRAPH - Keep a log of your auto use for tax purposes or just to find out how much it costs to operate it. Prints out many reports with functional graphs. PENNYWISE - Helps you keep all your finances in order. FURNISH - An excellent floor planner. Rearrange your furniture, custom design, etc..

GRAPHICS

- ☐ #007-FRACTALS: Explore the world of fractals with these great programs, MANDELMOUNTAINS (v2.0), FASTGRO and FRACGEN.
- ☐ #063-ANIMALS: 25 pictures of all sorts of animals. Point and click or use the slideshow projector. Also can be used in multimedia presentations or other projects.
- ☐ #067-COVERGIRLS2: More fashion models from around the world. Disk 2 of the series.
- ☐ #072-COMBAT JETS: A collection of the world's best fighters and bombers being used today.
- ☐ #071-RAYTRACE2: More stunning Ray Trace pictures. Great for showing off your Amiga or using in a project.
- ☐ #075-SPACE/ROBOTS: This disk is packed with great shots from space and a collection of assorted robots. Comes with viewer.
- ☐ #083-SCENIC1: Beautiful art and pictures of the outdoors. Waterfalls, mountain ranges, sunsets, much more. Disk 1 of the series.
- ☐ #89-SCIFI: Star Wars and Star Trek fans this disk is packed with your favorites. Point and click.
- ☐ #288-CLIGHT: An extremely easy 3D Ray Tracing generator that is both powerful and flexible. Don't spend your \$5 on anything else until you've tried this one.

UTILITIES

- ☐ #10-HARDDRIVE: Everything needed to maintain your hard drive. MRBACKUP, KWIKBACKUP, BACKUPII - Great utilities for backing up your data, similar to QuarterBack. DISKSALV - A powerful disk repairer with a well down user interface. LOOKFOR - Finds any file on your drive. FILEMASTER - Allows you to manipulate bytes of data, like NewZap but much better.
- ☐ #345-BACKUP: XCOPYIII and NIB - Copies what the others won't. Gets rid of annoying code wheel protection and other protection schemes. Plenty of parameters included.
- ☐ #001-VIRUS PROTECTION: Protect your files with these Virus Utilities. BERSERKER, VIRUSX (v4.1), VCHECK, GUARDIAN, XENOZAP, plus many more.
- ☐ #003-COMPRESSORS: 16 files compressors, to include LHArc (v1.20), ARC (v2.3), LHWarP (v1.4), PKZIP, and ZOO (v2.0). These will compress your files up to 50% and are indispensable for the Telecommunicator or Hard Drive owner.
- ☐ #015-DISKUTIL1: SID - List directories, copy, delete, move and rename files with the click of a button. View text files & IFFs, hear sounds, compress and decompress ARC files. Allows for custom commands. If you don't have this program, get it and you won't have to mess around with CLI commands ever again. TURBOBACKUP - Copies disks in less than 105 seconds. FIXDISK - Recover files from defective disk, even unreadable tracks. DISKSPEED - Gives accurate results of true disk performances. RAMCOPY - For one drive users. Allows you to copy disk on one pass. Also on this disk - FASTDISK.
- ☐ #032-ENHANCEMENTS2: ARP (V1.3), CANCEL - Automatically cancels any system requestor that comes up when computer is left unattended. FLAMEKEY - Locks out any unwanted intruders when you're away from your computer. SMARTICON - Adds a "iconify gadget" to workbench windows, and when clicked on, it iconifies the window into an icon. SNIPIT - Allows you to cut and paste text anywhere on your workbench screen. MYMENU - Add your own menus with your favorite commands. LEFTYMOUSE - for the left handed user. PYRO - Ignore your computer and a fireworks show begins. Many more enhancements on this disk.
- ☐ #035-MOUSE: DMOUSE - Auto-activate any window without clicking. MACHII - A mouse accelerator with hot keys (and other stuff). Many more Mouse enhancements to include a mouse driver for left handed users.
- ☐ #039-MISC: A grab bag type disk full of useful tools and applications from ARP projects to ANSI editors.
- ☐ #076-ANIPPOINTERS: A great collection of animated pointers. Replace your old workbench pointer with a new colorful animated one. Dragons, mermaid, fish, crosshair, globe, rainbow, spinning ball, snakes, many more. If you can't find one to suit your needs, POINTERANIM allows you to custom design your own.
- ☐ #073-VIEWERS: SHOWI22 - A great picture presenter that incorporates several different wipes and effects, fade-in, dissolve, magnify, etc., supports scripts and text. Also includes a smaller version. HANGIF - Now it is a snap to view IBM GIF type pictures using one simple command. MULTIVIEW - shows IFF, Atari, and Mac pictures with an easy to use graphic interface. Converts icons into IFFs. Also on this disk SHOWANIM (v5.3), IFFMIRRORS, SUPERVIEW, more.
- ☐ #077-FONTS: Includes FONTEEDITOR, NUFONT, KICKFONT, SLAVICFONT, PENPALFONT, SIGNFONT - Allows you to write in American Sign Language. Many more different fonts and editors.
- ☐ #096-ICONS: Over 600k of various icons for projects, tools, drawers, etc. Something for just about everyone and if you can't find it, custom design it with ICONMEISTER - A versatile Icon Imaging program.

BEST BETS

- ☐ #B400-BIBLE: Out with our old 7 disk bible set and in with this new compact 3 disk set of the King James Version of the Old & New Testaments. Incorporates a great Can-Do interface for easy viewing of any chapter you wish with only a click of a button. Search, copy, print, with out touching your keyboard. 3 disks only \$9.90.
- ☐ #048-GOLDENFLEECE: Another excellent text adventure from the Cranware Library! Help Jason find the mythological treasure in this very well written game. Excellent parser and extremely addictive.
- ☐ #138-ENHANCEMENTS4: AMIDOCK - Run any program from workbench in this unique button environment. Completely bypasses drawers. 3D LOOKS - Add a 3D look to your workbench screen. SYSINFO - Evaluates your system, compares it to other configurations, and displays the results in a nicely done display.
- ☐ #129-CLIP-ART1: This disk is packed with clips to use on your favorite WP. Covers a wide range of subjects from business to home.

PROGRAMMING

- ☐ #204-C-COMPILER: Powerful and full featured C compiler and environment system by Mathew Dillon.
- ☐ #201-CTUTOR: Covers Game Programming, Sound Implementations, Device Drivers, Double Buffering, IFF reads and writes, and much more.
- ☐ #209-LOGO: POWER LOGO - A programming language based on Lisp and Logo. It's versatile, highly interactive, organizes programs as collections of procedures, and includes list of first-class data objects.

MULTIMEDIA

- ☐ #098-VIDEO: STILLSTORE - A program designed for freelance, corporate and broadcast television. It loads and displays IFF images of any resolution interchangeably from a list of files or as input directly. Full screen display or 1/4 display. Many more features. TITLEGEN - A program to title videos through a genlock, implementing the bottom-to-top "Rolling Credits" that are used at the end of productions. Using a very easy-to-learn script format, you can generate complex title sequences.
- ☐ #130-MAGNETIC PAGES: Create your own disk based magazine with pictures, text, sounds, music, and other effects. This is ShareWare, but well worth the registration fee.

MUSIC & SOUNDS

- ☐ #018-AUDIO: MED (v2.0) - A full feature music editor. Editor uses features such as cut/copy/paste tracks or blocks. Adjustable vibrato, tempo, crescendo and note volume. Low pass filter on/off, lots more. DISKTALK - Neat little program that plays digitized sound samples when you insert or remove a disk. PERFECTSOUND - A sound editor and AUDIOTOOLS - for accessing the audio device.
- ☐ #079-SCORES: This disk is packed with Easy Listening and Folk music to be used on DMCS.
- ☐ #090-CLASSICROCK: DMCS scores of the classics: Stairway to Heaven, Smoke on the Water, Riders on the Storm, also some modern rock tunes. Over 35 scores in all.
- ☐ #100-SOUNDS: All your favorite lines from the Saturday morning cartoons. "What's up, Doc?", "That's all folks!", etc.
- ☐ #104-SOUNDS: All the great one-liners & various sounds from the Star Trek series. "He's dead, Jim!", "Beam me up, Scotty.", etc.
- ☐ #409-AMIGADEUS: This is a self booting music disk of Mozart's favorites.

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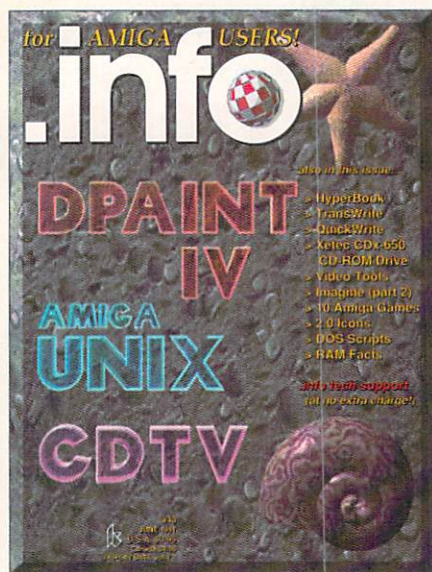
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BACK ISSUES

#2 INFO 64, Winter 1983/84

Guide to C64 products, Koala pad, Flexidraw, UltraBASIC-64, Home Accountant vs. C.P.A.

#3 INFO 64, Spring 1984

Product Round-up: 1000 product listings for C64, Superbase 64, Commodore LOGO, C64 Forth, Model Diet, Computer Mechanic.

#6 INFO 64 Spring 1985

Color Gallery! C64 hard drives, Intro to Assembly Language, COMAL 2.01, The Print Shop, Whither C/PM.

#10 INFO May/June 1986

Monitor Roundup! C64 wordprocessors, Multiplan for C64/C128, Amiga BASIC, Tips & hints.

#11 INFO Aug/Sept 1986

Product Roundup issue: over 1500 hardware and software listings for C64, C128 and Amiga.

#12 INFO Nov/Dec 1986

Graphics report: C64/128 and Amiga painting, CAD, drafting, video animation, tools and utilities. Idea-processors, 8 bit business software.

#13 INFO Jan/Feb 1987

Games issue: C64/C128 and Amiga games. 8-Bit business and application software (part I), Telecommunication networking, Amiga Music.

#14 INFO Spring/Summer 1987

Product Roundup issue: over 2000 hardware and software listings for C64, C128 and Amiga. First look at the A500 & A2000 systems.

#15 INFO July/Aug 1987

1st Annual C.H.U.M.P. Magazine! Commodore & Amiga Survival Guide, Anne Westfall interview, TDI Modula 2, Supra Hard Drive.

#17 INFO Nov/Dec 1987

ANNUAL GAMES ISSUE! GEOS Update, 16/32 bit comparison, C128 ROM upgrades, B.E.S.T. Accounting, Word Writer 3, DIGA!

#18 INFO Jan/Feb 1988

Desktop Publishing & wordprocessors (part I), Virus diagnosed, Geos Update, C64 Power Cartridges, C128 Superpak II.

#19 INFO Mar/Apr 1988

Desktop Publishing & wordprocessors (part 2), Leo Schwab interview, GEOS Update, ICT hard drive, Digital SuperPak2, Thoughtform.

#20 INFO May/June 1988

Desktop Video: Titlers, genlocks, converters, C64 slide show programs, GeoStuff, AmigaDOS 1.2 Bugs, Joel Hagen tutorial.

#22 INFO Sep/Oct 1988

Digitizing, Mac VS. Amiga, GeoStuff, Over 50 reviews for C64, C128, and Amiga computers, INFOMania Game Tips! BRYCE debut!

#23 INFO Nov/Dec 1988

ANNUAL GAMES ISSUE!! INFO Mania Game Tips, New Products, News & Views,

#24 INFO Jan/Feb 1989

Amiga 3D Graphics Round Up, Reichart Von Wolfsheid interview, GeoStuff, SuperBase Pro, Spectrascan, Sky Travel.

#25 INFO Mar/Apr 1989

Amiga Animation Round Up, Rodney Chang interview, C128 T.H.I.S., GeoCalc 128, Dr. Term Pro, AC/BASIC, Microfiche Filer Plus.

#26 INFO May/June 1989

Paint Program Round Up, Loren Lovhaug interview, Removable Mass Storage, 1581 Toolkit, MicroLawyer, WillMaker, Pen Pal.

#27 INFO Jul/Aug 1989

3rd Annual C.H.U.M.P. Magazine! Dale Luck interview, Sound & Music, Fractals, GeoProgrammer, Silentwriter LC890, Transcript.

#28 INFO Sept/Oct 1989

Video Boot Camp! High-End Amiga Expansion, Gail Wellington interview, 3D options, Home Town, Viking I, A-Max, Anti-Virus, V.I.P.

#29 INFO Nov/Dec 1989

Annual Games Issue! Chris Crawford interview, SFX Sound Expander, The Write Stuff 128, Toshiba ExpressWriter 301, RawCopy, Mac-2-Dos.

#30 INFO Jan/Feb 1990

Amiga DeskTop Publishing Tools, LOGO, A590 Hard Drive, Dual Serial Board, Abacus Books, Twin Cities 128 book.

#31 INFO July 1990

Amiga 3000, AmigaVision, AmigaDOS 2.0, R.J. Mical interview, Ray-Tracing, TV*Text Pro, CanDo, CrossDOS, FractalPro, ScanLab 100.

#32 .info September 1990

First issue of monthly All-Amiga .info! Turbo Silver, Laurence Gartel interview, Page Stream 1.8, Power PC Board, introducing CDTV, all new .info Technical Support section by Sullivan and Zamara.

#33 .info October 1990

Fractal Frontiers, Inside AmigaVision, Peggy Herington's new Music & Sound column, Pro Video Post, The Art Department, Archivers.

#34 .info November 1990

The Video Toaster Cometh! George Christensen interview, ProWrite 3.0, Synthia II, Saxon Publisher, Pro Draw 2.0, Hard Disk Management.

#35 .info Dec 90/Jan 91

Annual Games Issue! The year's top 25 games, Exclusive - Amiga Unix, Battletech Center, Elan Performer, GVP Impact II SCSI RAM Controller.

#36 .info February 1991

Image Wrapping, The Amiga in Europe, Victor Osaka interview, World's first Video Toaster Show, Renderman, A-Max II.

#37 .info March 1991

Ellison Horne profile, Video Toaster part 2, MINIX 1.5, PageStream 2.0, Power PC Board, Animation Studio, AudioMaster III & E-Z FM.

#38 .info April 1991

Amiga Networks, Draw4D, Auto-Script, J. Hopkins profile, Video Toaster part 3, WOC, CES, UNIX shows, MacroPaint, Big Belly RAM.

#39 .info May 1991

Special Music & Sound issue! New Products from Casio, Dr. T's, and Blue Ribbon. Plus Imagine, Arrow 1500, Bodega Bay, and Professional Page 2.0.

#40 .info June 1991

DPaint IV! CDTV, Hyperbook, Xetec CD-ROM, Amiga UNIX, AmigaDOS Scripts, TransWrite, RAM facts, and Amiga World Expo NY.

#41 .info July 1991

CDTV, Proper Grammar, PageStream 2.1, Image Processing, Trumpcard 500, Supra Drive 500XP, CI3000 Film Recorder, Art Dept. Professional.

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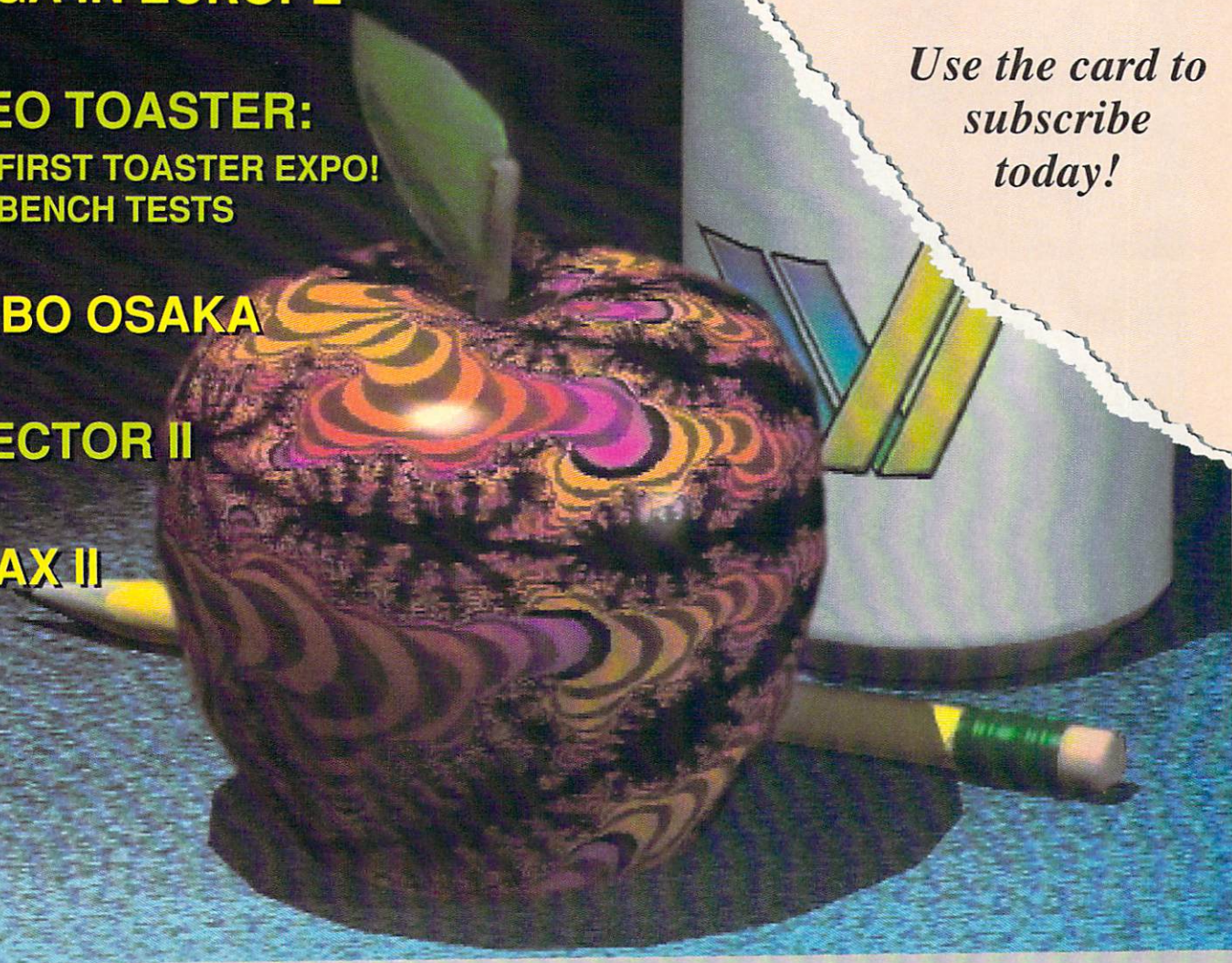
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Image Processing and the Creative Process

Derek Grime shows you how to use *Pixmate* (or any Amiga image processing program) to turn digitized images into stunning illustrations.

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Finding Out About File Types

Jim Butterfield shows you how a little mucking about in hexadecimal can tell you all you need to know about a file.

page 62

The Instant Talking Alarm-Clock

Chris Zamara's AmigaDOS script gives you a free background appointment reminder with just two DOS commands!

Image Processing and The Creative Process by Derek Grime

If a client called me up and requested a picture of a pygmy marmoset, I would head out to the library or dig through my morgue (picture file) until I found something appropriate. Then I would sit down with pencil, papers and a mug of coffee and sketch and erase until I started to make some progress. When I had a pencil rough that I was happy with I would trace the picture into the Amiga using my handy drawing tablet. Then I would color, paint and tweak the illustration to produce a pygmy marmoset that would fill even Marlin Perkins with pride.

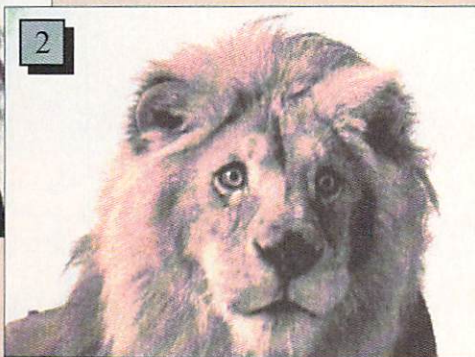
prised when he offered to show me some 2D artwork he had been working on. The pictures were far different from the usual Amiga illustrations - many resembled impressionist paintings.

My friend had discovered image processing. By digitizing photographs and using graphic manipulation software he had opened up a whole new world of computer graphics. The effects are easy to reproduce on your own Amiga - try out some of these methods on your home system. With a little effort you can take a single image and reproduce many of the effects that illustrators take years to learn. I was surprised that many of the most common processing methods produce pictures that look like more traditional hand-produced artwork.



Being able to draw is something I take great pride in. I realize that many Amiga studios resort to a *Digi-View* and a copy of the National Geographic when they need a picture. The thought of "borrowing" a picture makes me shudder, though I'm sure it warms the hearts of copyright lawyers everywhere. In the past I have often publicly complained about the many picture pirates we seem to have on the Amiga. Carried away by my own rhetoric, I have gone so far as to say it was impossible to create compelling artwork on the Amiga without having any drawing ability. Boy, was I wrong.

Last week I was at the house of a friend who has been in the Amiga graphics business for a couple of years now. He has a strong visual sense, but his illustration abilities leave a lot to be desired. I was quite sur-



One of the premiere image processors is *PIXmate* from Progressive Peripherals & Software. If you don't own this workhorse, it would make a valuable addition to anyone's hard drive. Though *PIXmate* is four years old and does not support many of the newer graphics modes (like Dynamic Hi-res or IFF24) it still offers important IFF conversion utilities and many, many image processing features.

Figures 1 & 2: HAM conversion

I'll use the lion picture that comes on the *PIXmate* disk for this demo. The original (Figure 1) is in hold and modify mode,



interlace resolution. The first thing we must do with our test picture is reformat it in 32 colors. Since HAM handles its color palette in non-standard ways, *PIXmate* will sometimes produce strange results from HAM pictures. I've also used the 'Bias' control to slightly lighten the entire image (Figure 2).

Figure 3: Pseudo Color/Smooth

Just changing the color palette can be visually stunning. I used the 'Pseudo Color' option with the 'Smooth' function to get Figure 3. 'Pseudo Color' merely replaces the existing colors with a ramp of psychedelic hues. 'Smooth' forces the colors to be ramped evenly over the entire palette. The Pseudo Color function takes no perceptible processing time at all; the results are instantaneous. You can get the same results with your favorite paint program by altering and spreading the colors in the palette by hand.

Figure 4: Toolbox & Histogram

PIXmate really shines when you start to use the image processing functions. Figure 4



shows some of the tools available in the program. At the top are the image processing gadgets. Under that is a Histogram of the colors in our Lion picture. As you can see, a histogram is really a bar chart of all the pixels in the picture. These levels can be adjusted to eliminate certain colors, lower and raise contrast, or brighten and darken the picture. For now, let's focus on the image processing tools.

You can see that the requester is divided into many small areas, each concerned with a different way of modifying the picture data. We are going to concern ourselves with only the pixel processing gadgets. There are eight in all and they are located under the so-called 'kernal' gadgets.

Picture Averaging

'AVG' stands for average, which results in smoothing the picture. AVG divides the picture into 9-by-9 pixel blocks and computes the average color. This also reduces stray pixels that don't necessarily add anything to the image. These strays are especially

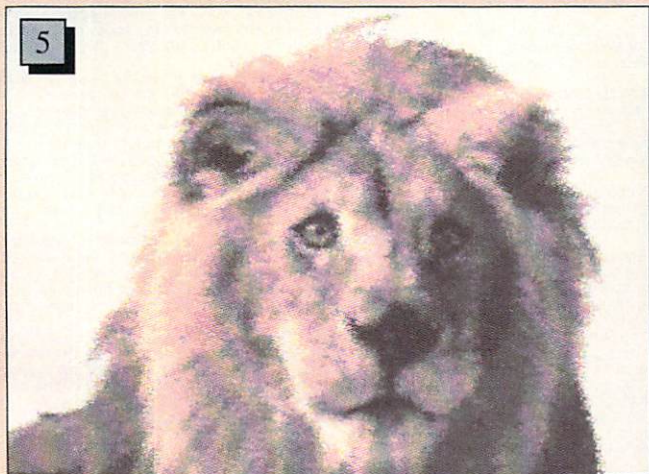
noticeable with digitized pictures and can cause some pretty serious screen flicker in interlace mode. AVG smooths the color palette and gives the picture a softer feel, much like a painting. Also, because IFF image compression is much more effective on an averaged picture, you'll find that it doesn't take up nearly as much room on disk.

Figure 5: Randomizing

'RND' is the opposite of average: it randomizes the picture, adding noise and obscuring details. Figure 5 has been randomized three times to give it a look reminiscent of a dry brush on a rough surface. RND gives your image the grainy look of poor TV reception. Futuristic scenes work well with RND, as people have seen this look used in science fiction movies and television shows such as "Max Headroom".

Figure 6: Median Filters

The 'MF1' and 'MF2' gadgets are similar to the average function, but use the median





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Featured Disk

DD79abcd: Amiga C Programming Tutorial - This is the most comprehensive C language, Amiga oriented set of tutorials available. Includes full working examples, source code and an incredible set of lessons. Included are full discussions and examples of most Amiga programming topics. Four disk set, counts as three.

New Disks

FD55:Puzzles - Contains TripleYatz, a multiplayer, multigame yatzee clone. Also BoomSquad, an info best of PD Pick (#39, pg 45), Adventure, Logic, and Mosaic; four very good strategy games.

FD56: Arcade - Includes SpaceWar, an info "Best of PD" pick (#39, pg 45), HueyRaid a well done helicopter arcade game, and Game - a "GameBoy" emulator with a version of Tetris.

WB87: New Testament - Contains the entire text of the New Testament in a well thought out user interface. 1mb suggested.

WB88abc: The Complete Bible - A three disk set, with the entire text of the New Testament and Torah (Old Testament) includes wb87. 1mb suggested.

WB89:Education - Fish, not your everyday electric eel, but a fun to experiment with simulated fish aquarium. Also contains a well done math quizzer, history, religion, geography and more.

WB90: Rippers, Strippers and Beats - For the Amiga music enthusiast, this disk contains many programs designed strip music from your favorite games and programs. Music can then be played with your favorite PD Music program. Also contains Drums, a very nice drum machine. This disk does require moderate knowledge of the CLI.

WB91:AV Educational - Flags of Europe, beautifully presents all of the flags of Europe along with maps and geographic statistics of the countries. Requires AV.

Other Great Disks!

FD5: Tactical Games - BullRun - a Civil war battle game, Metro - you play the role of a city planner. Build wisely and your system will be a success, but poor planning will lead to disaster and financial ruin. Very very hard forming.

FD6: GAMES! - This disk is chock full of games including: Checkers, Clue, Gold - A new slide the pieces puzzle, Jeopard - An enhanced version of Risk, RushHour - Surprisingly addicting, and SpaceWar - Best described as a cross between Combat-Tanks and asteroids.

FD7: PACMAN - This disk contains several pacman type games including: PacMan87, MazMan and Zonix.

FD9: Moria - This has great graphic controls, multiple spells, similar to Larn and Hack. Play time several weeks!

FD10: HackLite - A dungeon adventure game. Considered a must-have classic. This is the second release of this game on the Amiga. Great Amiga graphic interface. Play time several weeks!

FD11: Las Vegas and Card Games - Las Vegas Craps - The best Las Vegas Craps simulation every written for any computer. Contains extensive HELP features. Also Thirteen-One, VideoPoker and more.

FD12A,FD12B: Star Trek, The Game - This is by far the best Star Trek game ever written for any computer. It features mouse control, good graphics, digitized sound effects and great gameplay. Counts as 2 disks. Req. 1Mb and two drives (or hd).

FD13: Board Games - contains multiplayer Monopoly, Dominoes, Paranoids, and others.

FD14: Dungeon Master Hints and Arcade Games - DM maps, spells, item location, and hints and more, also on this disk, Hball - an arkanoid/breakout type game, Trix - a Qix type clone.

FD17: Educational Games - This disk includes several games for the younger members including geography, math, science, and word games, also includes Wheel of Fortune.

FD20: Tactical Games - MechForce(3.72); A game that simulates combat between two or more giant, robot-like machines. Simple words can't begin to give you the feel of piloting a 30 - 40 foot tall, fire breathing, earth shaking colossus that obeys your every whim.

FD26:Arcade Games - Marble_slide, this is a truly commercial quality game. Similar to a Lucas game named PipeDreams, excellent playability and entertainment, Mutants, a small version of the arcade game of the same name, also SuperBreakout a pong/arkanoids type game.

FD27: Arcade Games - This disk is loaded with some great

games. Includes, Raceorama a great racing car game with ten different courses, MiniBlast a helicopter gunship type clone, Shark in the same class as frogger, and SBreakout the original breakout with more.

FD29: Shoot'em ups - WWII - you're the pilot of a WWII plane flying through enemy territory, you've just been spotted, good luck on you mission, SpKiller - try and penetrate enemy lines with this game, and Retaliator - another great game.

FD31: Games! - Air Traffic Control - a good ATC simulation game, Black Jack Lab - a full featured set of card games, ChessTel - play chess with your friend in distant and remote places with this game and a modem, labyrinth - a well done text adventure game (like an infocom game), and MouseTrap - a 3d maze game.

FD32:Flight Simulator - Includes an instrument flight simulator for a DC10.

FD33: Arcade Games - Freddy a mario brothers type of game, Gerbils a target practice game, PipeLine a German interpretation of Pipe Dreams, Tron a light cycles version, and wetroids a wonderful version of asteroids with a hilarious twist.

FD34: Games - Includes WellTrix a derivative of the addictive game of tetris, and new version of BackGammon. Also included are several new "Schwable type Hacks".

FD35 Omega (v 1.3) - A new outstanding dungeon and outdoors adventure game in a similar vein as hack, rouge, and moria. This version is considerably faster and better than all previous versions. Play time several weeks or months.

FD37a & b:Tactical Games - Empire (2.2w) This great game comes highly recommended. With a full-featured graphic front end.

FD38:Games - Cribbage Master - A great cribbage game and tutor, Spades - a well done card game, ChineseCheckers - A computer version of this classic, Puzz - a slide piece puzzle game and construction set.

FD39a & b:Tobias Star Trek - This is a new, completely different version of Star Trek than that found on FD12. This one was created by the German author Tobias. Now with English instructions. Very Excellent!!! Counts as two disks. Requires 512k memory, a 500, 2000 or Pal.

FD40:Arcade - MiddleEast - a timely arcade game of death and destruction set in Iraq, BackToTheFutureII - a very playable demo version of this soon to be released commercial game, City - a missile command clone.

FD41:Games - Includes Capital Gains - a stock market game, Ball a Arkanoids type of clone with many great twists, and Desert Shield - a search and destroy conquer theme.

FD42:Games - Includes SpaceWar3 - a remake of this original Amiga classic, Trippin - a fascinating board game of intrigue, strategy, and player manipulation, Dominion - an engrossing strategy game of galactic war and conquest, Frog - a frogger type clone, and Mines - a very good strategy board game.

FD44: Game - Mechlight is an out of this world role-playing adventure comparable to hack and moria. The setting, interplanetary colonies and space stations. In your quest to explore the world, take time out to liberate bad guys of their most valuable possessions, engage in a mortal combat or two against robots and alien life forms, pick up a new amiga 9000. Most of all, don't forget to stay alive...

FD45: Arcade - Three good shoot'em ups. Batman - save the city from the Joker, DriveWar - gangsters are moving in on your territory, stop them at all costs, Web - a spidery, buggy affair of eat or be eaten.

FD47: Arcade Games - Contains DownHill - a demanding computer slalom ski game, MicroPac - a Workbench mini-pacman game, CrackOut - a breakout clone, Jet - a superb aerial dogfight game, AmegaRace - an interesting asteroids type of game, and WindyDay - a unique arcade shoot'em up.

FD49:Chaos Cheats - This disk contains an everything you wanted to know about cheat set for Chaos Strikes Back, including full maps, spells, object locations, super characters and more.

FD50: Submarine Game - Sealance, one and a half years in the making, this is an outstanding submarine tactical game. Commercial quality, highly recommended.

FD51: Games - DesertStorm a fast action arcade game, AmigaTraitor a well done concentration game, Chute a parachute jumping game, Running a dungeon adventure game similar to Wanderer, and Solix a solitary card game.

FD52: Classics Games - PetersQuest a well done Mario brothers type of game, Jymbo a two player missile command clone, and Vstank a tank commander game.

FD53: Great Arcade - On this disk is a wonderful implementation of the ever popular classic arcade game Defender. Also contain Air Race a WWII flying ace arcade

game, and Psycoblast new creation idea game.

FD54: FoodFight - Contains Galactic FoodFight, a wacky spaced out arcade game loaded with shooting ketchup, and hamburger eating monsters, and flying pizzas.

WB2: General Interest - contains, Galaxy a program that represents the collision of two galaxies, Larn - an adventure/action game similar in concept to rogue or hack, but with a much different feel. Try it, you'll like it!, StarChart - a program that lets you display and identify about 600 stars, galaxies and nebulae visible in the Northern hemisphere.

WB4:Telecommunication - This disk contains several excellent pd communication programs designed to get you on line quickly and easily, Access (1.42) - A very nice ANSI term program based on Comm v1.34, but with the addition of transfer protocols, Comm (1.34) - Last version of one of the best public domain communications programs ever made on the Amiga, Handshake (2.12a) Handshake is a Full featured VT52/100/102/220

WB5 - Fonts #1 - Several fonts (35) for the Amiga, also included are five PageStream fonts, and ShowFont - a font display program.

WB6: Video Fonts #2 - ShowFont(4.0) This program allows you to quickly and painlessly view all 256 characters in a typical font. Large AmigaDos system fonts (many up to 56pts).

WB7: Clip Art - This disk is loaded with black and white clip art. Art includes, trees, watches, tools, US and State maps, and more.

WB9:Icons - Truly a multitude of various types and kinds. Also includes IconMiester, IconLab, and others great utilities to help generate icons.

WB10:Virus Killers - The latest and best VirusX(4.0), Kv(2.1), and ZeroVirus(1.3).

WB11: Business - Clerk(4.0), finally a full featured business accounting PD program for the small to medium company. Includes receivables, payables, end of month and much more.

WB12: Disk Utilities - This great disk is loaded with wonderful utilities for everything including making disk labels, disk cataloging, disk optimizing, disk and file recovery archive and organizing, and all sorts of file manipulation. A real must have!

WB13: Printer Drivers and Generator - over 70 different drivers, and if these don't do it, with PrtDrvGen you can make your own.

WB14: Video - on this disk are several utilities for the video enthusiast. We have included multiple slates, video titling, Bars and Tone, Gray Scale, Screen fades and swipes, Interface toggles, and SMPTE Calculators. Also on this disk is a full featured video cataloging program.

WB15: Business - This disk contains a spreadsheet, a database, a project/time management program and financial analysis (stocks).

WB16: Business - This disk contains an inventory manager, a loan analysis program, a great calendar/scheduler, a rolodex program, and pennywise a good "Cash Book" accounting for home or office.

WB18: Word Text Processors - This disk contains the best editors. Includes TextPlus (v2.2e) a full featured word processor, Dme(v1.35) a great programmers editor with strong macro features, TexEd(v2.8) an enhanced Emacs type editor, and a spell checker.

WB20: General Interest - DiskSalv V1.42 a disk recovery program for all Amiga file systems, FixDisk V1.0 another file recovery program with features DiskSalv doesn't have, 3DLookit gives a 3D appearance to your WorkBench, Clean V1.01 a program to de-fragment memory, Tracer - trace any part of an image.

WB22: Fonts #3 - Several more great fonts. These, like the other font disks work great with DPaint and WYSIWYG word processors.

WB23: Graphics and Plotting - Plot (20b) a three dimensional mathematical function plotter. Can plot any user defined function, BezSurf2 - produce awesome pictures of objects one could turn on a lathe. Can also map if image files onto any surface that it can draw. Now compatible with most 3D packages, and VScreen - makes a virtual screen anywhere, great for DTP.

WB24:Animation and Paint - On this disk, DA a complete commercial quality cell oriented animation package. Movie an "ANIM" player for standard animation, QuickFlx an IFF slide show and cell animation program. Also on this disk are two PD paint programs of good quality.

WB25:Educational - On this disk are two programs that can generate maps of differing types, World Data Base uses the CIA's data base to generate detailed maps of any entered user global coordinates. Also Paradox a great demonstration of Albert Einstein General Theory of Relativity.

WB26: Disk Utilities #2 - MrBackup, KwickBackup - two well done utilities to help with harddisk and floppy disk backups, FileMast - a binary file editor, LabelPrinter - Disk label printer with very powerful features.

WB27: Nagel - 26 Patrick Nagel pictures of beautiful women.

WB29: Graphics and Sound - This disk has several different Mandelbrot type programs for generating stunning graphics. Includes, MandelMountains - a realistic terrain generator, Fracgen - generated recursive fractals from user input, Mandelbrot and Tmandel - two fast mandelbrot generators, also Mostra - the best IFF display program to date, will display ALL IFF's including Dynamic HAM, and Sound - a great IFF sound player, will play anything. Try this disk, you'll love it!

WB33:Circuit Board Design - several terrific routines for the electronic enthusiast, including PCBtool - a circuit board design tool, LogicLab - circuit logic tester, and Mcad (1.26) a well done new release of this PD CAD program, now comes with predrawn common circuit components for insertion into schematics.

WB34: Utilities - Several well done utilities, some will require moderate knowledge of a CLI or Shell for setup, Chatter Box - this one will play any user defined sound after any event (ie. disk insert, mouse click, disk removal...), Artm - The Amiga real time monitor, gives you full control of the Amiga OS, very powerful program, Helper - help program to make learning the CLI easier, and more!

WB35: 3d Graphics - This disk contains several neat programs to use with your 3d modeling/raytracing programs 3dFont - Full vector font set for use with 3d programs, FontMaker - make 3d fonts from any system font, Make3DShape - create 3d shapes from any image, DumpToIFF - create 3d animations preserves pallet, and World3d - a demo program of a front end for use with DKBRender.

WB36: Graphics - On this disk are several programs to create stunning graphical images including, MPath - creates swirling galaxy images, Roses - produce an unlimited number of variations of images that a symmetrical similar to a rose, SimGen - display those spectacular images as part of your workbench screen, and RayShade - a very good raytracing program, create your own beautiful 3d graphics.

WB37: Educational - Educational games and puzzles that cover math, geography, spelling, and books. Ages 6 - 15

WB38: Plotting and Graphics - Plotxy is the most powerful full featured plotting package. Used by many colleges and universities. A welcome addition to our library! Highly recommended. Plans - a incredibly well done Computer Aided Drafting program, very full featured. Tesselator - a program that helps generate fantastic looking, recursive M.C. Escher type pictures.

WB39: Music - Intuitracker is a German offering of an exquisitely well done program that allows you to play music on your Amiga with CD like controls. Lets you strip out music from your favorite games or others and include them in your music library.

WB40: Music - "CD on a disk", 90 minutes of modern music on this well presented collection.

WB41: Music - MED an incredibly well done, full featured music editor. Create your own stunning music directly on your the Amiga. Similar to SoundTracker but better. Very powerful easy to use program.

WB43: Business - This disk contains AnalytiCalc - probably the most powerful spreadsheet program on the Amiga. A full featured spreadsheet with many features expected in a commercial package. Requires 1.2 MB of memory!

WB46: Clip Art - HighRes clip art with the following motifs - embellishments (borders, dodads), people, and

WB63: Disk Utilities #3 - Several highly recommended programs to aid in removing duplicate files from your hard drive, performing file backups, Binary editing, fast formatting, file recovery, disk track recovery, and forced DISK VALIDATION of corrupt disks.

WB66: Icons #2 - Lots of neat icons. Also, several wonderful programs that let you create your own icons, modify and manipulate icons and info structures.

WB68: Music Utilities - several good utilities for the Amiga music enthusiast. Includes, Noisetraacker - a great music creation program, Sonix2MOD - converts sonix to .mod files which then can be used by noisetraacker, soundtraker, and MED, SpeakerSim - a speaker design tool demo, Wondersound is an additive harmonic instrument design tool with a separate envelope design window and 16 relative harmonic strength and phase angle controls.

WB69: Music - This disk has over 90 minutes of classical and modern electronic music for you Amiga.

WB70: Desk Top Pub - Atcp - transfer Macintosh screen fonts, Mac or IBM format .AFM metric files, to Amiga screen fonts and PPage .metric files. With this program open door to the libraries of Adobe and PostScript type, Calendar - month templates in PS form, Post - a full featured post script file display and print utility.

WB71: C64 Emulation - The A64 Package is a complete, very powerful, Commodore 64 emulator.

WB75: Music - over 100 instruments files (.inst) and sample sound files (.ss) for your music programs.

WB76: Applications - This disk contains Stichery - a often requested knitting design program, Lotto - a rather complete lottery tracking and prediction utility, SSS - this screen capture program can grab almost any screen including games, Today - a personal calendar, Tarot - fortune teller, and Grammar - grammar checker.

WB78: AV - On this disk are two Amiga Vision programs (bubbler, sync) written by Lou Wallace, chief technical editor of Amiga World. These programs are marvelous examples of how too's with AV.

WB79: Home & Business Accounting - Includes Ckbacct - the most complete checkbook accounting program going, LCDCalc - this well done calculator has a very large display and operates from the keyboard or mouse, Mileage master - monitor your automobile mileage with this mileage log, Grammar - a grammar checker, and Worldtime - find out what time it is in up to 50 global cities.

WB80: Graphics - Raytracing programs generate absolutely stunning realistic looking planes, rockets, buildings.... and surreal images often consisting of highly polished spheres and objects. 3-D Master is the most powerful EASY-TO-USE of it's kind we have seen to date. This is easily better, and more full featured, than similar commercial programs costing in the hundreds of dollars.

WB81: Great Applications - DataEasy a very easy to use, database program. Don't let the ease of use fool you, this is a very full featured database program including full printer control for address labels and mail merge applications. Also includes, TypeTut a good typing tutor, RLC a full featured label printer, Banner, a multi-font banner maker, and Budget a home accounting in a program. Highly recommended.

WB82: Animations - Four full length, well done "movie" style animations. Including, Coyote, Juggler11, GhostPool, and Mechanix. Two disk set, counts as one!

WB83: Computer Art - This disk has some of the best Amiga generated computer art that we have collected in the past 5 years.

WB85: Graphics - Contains several programs for manipulating 24 Bit color images (ham-e) and a rather nice Iff image processing package.

WB86: Amiga Vision - Contains the Centurion Press, An Amiga newspaper by Lou Wallace.

DD45: AREXX PROGRAMS - This disk contains several useful arexx programs and examples, PopCL4 - The latest of a must have utility.

DD47: Pascal - This disk contains everything needed to program in Pascal. Includes, A68k (1.2) 68000 assembler, Blink linking software and PCQ (1.0) a modest Pascal sub-set compiler.

DD49: C Compiler - contains zc(1.01) full K&R, zcc(1.0) front end, A68k(1.2) assembler, Blink linker.

DD50: AREXX #2 - a must have set of tutorials on AREXX and several useful examples and utilities for AREXX development.

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DD55: ARP - On this disk you will find the complete ArpRel3.0 release including the full user docs, the full Developers guide. ARP is the official AmigaDOS Resource Project (ARP) release 1.3. ARP makes many improvements to AmigaDOS and makes your system easier to use from the CLI.

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DD62: Basic and Xscheme - Cursor - a full featured Amiga Basic compiler, basic and text - several wonderful routines to help in basic programmers, and Xscheme - an interpreted object oriented language.

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values of the pixels instead. While 'MF1' samples a small block and gives a finer result, 'MF2' works on a larger area and produces a better effect. For Figure 6 I did two separate MF2 passes; the final image looks like a badly done paint-by-numbers. An illustrator would probably have to use oil pastels to recreate the effects that the median filter can do in just a few seconds.

Figure 7: Unsharp Masking

'USM' stands for 'UnSharp Masking' and is ideal for pictures like the lion. USM takes the original image, creates a blurry copy and then subtracts it from the original to give an extra sharp and detailed graphic. When you have a furry character like the lion, unsharp-masking brings out a lot of detail in the fur. This type of graphic reminds me of the older color photocopying process. Figure 7 is an example of a USM'd picture. The 'LCE' (Local Contrast Enhancement) gadget to the right performs a similar process to unsharp masking, but seems to produce a noisier, less detailed image.



Figure 8: Binary colorizing

If pop art is where you want to be, give the 'BIN' a spin. 'BIN' stands for binary, and converts each pixel to one of two colors. Depending on where the 'threshold' slider is placed you can get black and white or truly hallucinogenic colors like the ones I have here. A similar process is 'THR', which sets some pixels (depending on the threshold control) to color zero, and leaves the others unchanged. The Sixties have returned lately in some clothing designs, and it's not hard to imagine a picture like Figure 8 selling well on a tie-dyed T-shirt. Groovy.

Figure 9: LAP

For even greater variations, try using the 'LAP' or 'EDG' matrix operations. LAP enhances the edges in the current image, and will change your picture into something that will look like it was drawn with Crayolas. Figure 9 was a result of one click of the LAP button.

Figure 10: Edge detection

'EDG' is my favorite. Edge detection usually is done by mainframe computers for organizations such as NASA. For example, if a satellite shot was slightly out of focus or details were undefined, edge detection would be used to clear things up. Edge detection is also popular with the police: often, after a robbery, the police are left with a low resolution black and white video picture of the suspect. These pictures are often too muddy to give a positive ID of a suspect. After being processed, facial details can be very recognizable. In one famous case there was a photograph taken of the getaway car, but in the excitement of the moment the photographer did not focus the camera. After computer enhancement, the license number was clearly visible! Our lion picture is not an ideal candidate for edge detection because of the lack of hard edges.

Figure 10 shows what one pass of the edge detector will do. I also used the 'color complement' menu choice to produce a more interesting palette. I often like to play



with the palette at this point in the process. Remapping the white lines to black and changing all the middle tones to white gives a final image that looks like a charcoal sketch.

The 'Bias' requester is a different requester with a new bank of tools that control the palette. Using the 'C' or color slider will suck all the hues out of your picture, leaving a black and white graphic behind. This could be used for desktop publishing applications, or ported to monochrome systems like the Macintosh Classic. The 'Bias' controls can adjust the RGB values or change the color saturation and intensity.

Other Choices

PIXmate is by no means your only choice in image processing; most of these techniques appear in other packages. I would be doing the Amiga developers a disservice if I did not mention some of the other software used for image processing. Despite the name, Eagle Tree's *Butcher* is perhaps easier

to use than *PIXmate* and is a bargain at only \$37. On the high end of the scale is ASDG's excellent *Art Department* and *Art Department Professional*, which add quality features like ARExx ports, file conversion, and 24-bitplane input and output. We also can't forget NewTek's *Transfer 24* that is included in the *Digi-Paint* package.

As I am finding out, experimentation and not technical skill is really the root of creativity. Having a good visual sense helps, but having a powerful tool like the Amiga can elevate your pictures to new heights. There are literally thousands of combina-

tions of processes that can be applied to any image. Many of them rival techniques that traditional artists have taken years to master. Go out there and find some of your own, and if you discover something really interesting please don't forget to share it with the rest of us.

Derek Grime's studio has been producing Amiga animation for television since 1985. Recent clients include Disney, Nickelodeon, and MTV. Derek can be reached at: P.O. Box 1249, Station 'F' Toronto, Ontario, Canada M4Y 2V8

Products Mentioned

PIXmate, \$69.95, **Progressive Peripherals and Software**, 464 Kalamath St. Denver, CO 80204, 303-322-6512

Butcher, \$37.00, **Eagle Tree Software**, PO Box 164, Hopewell, VA 23860, 804-452-0623

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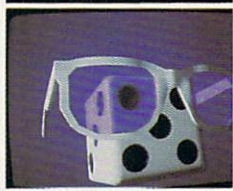
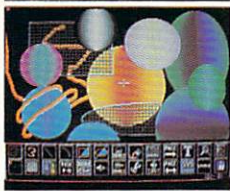
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Finding Out About File Types

by Jim Butterfield

New programs and files arrive from various sources: your local user group, bulletin board, or magazine/disk. Sometimes you get a 'bundle,' with a number of files grouped together by means of *Arc*, *Zoo*, or a similar utility.

Typing the command *Dir* will give you a list of file names. Sometimes the names will be meaningful. Sometimes the icons on the

Workbench screen will be helpful. Sometimes there are files that don't seem to have any purpose at all.

Take heart. This guide will help you sort out and identify most of the mystery files.

What's in a name?

The name of a file is often a hint as to its contents. *Readme* is usually a text file, which you can read using *More* or any

other text reader/editor.

You've already discovered that files whose names end in the characters '.info' are icon files or, more properly, "Workbench object" files, since they contain more information than just the icon. As we'll point out in a moment, the *Info* menu command will extract a good amount of data. Incidentally, a file whose name is simply ".info" is of a different type: it is a "Workbench window" file, describing a Window structure.

You can often guess that files ending with '.txt' are text files; those ending with '.doc' are documentation files; those ending with '.pic', graphic files; and so on. Unlike '.info' these suffixes are for the user's benefit only. As far as the Amiga's operating system is concerned, they are simply part of the filename.

Files whose names end with '.library' or '.bmap' are intended to live in the *libs* directory. It would be rare for you to get a file with the suffix '.handler', but that kind of file usually spends its time in *L:*. Any file containing a script (suffix '.script', perhaps?) that might be used frequently belongs in *S:*, and printer drivers and keyboard maps (you can usually guess these from the name if the documentation is feeble) go into the appropriate subdirectory within *devs:*.

Some PD programmers throw in 'source' files along with their programs. That's good for those who want to study code, and it helps reassure users that there are no hidden viruses. You won't need such files to run the program itself. Program source files usually contain readable text; they will have names that end with a 'language extension', such as '.c' (C source); or '.asm' or '.a' (assembly source). You may also find files ending with '.o' (object files), '.h' (C include files), '.i' (assembly include files) and perhaps '.lib' ('scanned library' files, usually read by a 'linker' program). You don't need any of these to run the program, but it's reassuring to know they are there for a purpose.

A name is purely the user's choice, however. If I should decide, unwisely, to name my latest program *spaghetti.o*, that won't stop it from running. A casual observer guessing from the name that it must be an object file rather than a program would be mistaken.

What's in a picture?

If an Amiga file comes with an associated '.info' file - for example, files *Pasta* and *Pasta.info* - you have a ready-made source of file information. In the "Workbench"

Listing 1. Examples of TYPE HEX outputs for various types of files.

1.Workbench:> type hex Road_README

```
0000: 526F6164 526F7574 65202D20 41207374   RoadRoute - A st
0010: 61727420 61742061 20227472 69702070   art at a "trip p
0020: 6C616E6E 6572220A 20202020 20202020   lanner".
0030: ... (Ctrl-C pressed)
```

Simple inspection shows this to be a TEXT file.

1.Workbench:> type hex c:copy

```
0000: 000003F3 00000000 00000002 00000000   ...ó.....
0010: 00000001 000003B7 00000002 000003E9   .....*.....é
0020: 000003B7 4E55FF60 48E73F32 70002B40   ...•NU. 'Hç?2p.+è
0030: ... (Ctrl-C pressed)
```

A file starting with 000003F3 is a LOADABLE file. It might be a program; but it could also be a library, a font, or other things.

1.Workbench:> type hex mypic

```
0000: 464F524D 00002FA2 494C424D 424D4844   FORM../.ILBMBMHD
0010: 00000014 028000C8 00000000 04000100   .....
0020: 00000A0B 028000C8 434D4150 00000030   .....CMAP...0
0030: ... (Ctrl-C pressed)
```

A file starting with 464F524D ("FORM") is an IFF file, usually containing graphics or sound data. This one is type ILBM, "Interleaved Bit Map," a picture.

1.Workbench:> type hex test.iff

```
0000: 4C495354 00001332 41414141 50524F50   LIST...2AAAAPROP
0010: 0000003E 494C424D 424D4844 00000014   ...>ILBMBMHD...
0020: 626D6831 626D6832 626D6833 626D6834   bmh1bmh2bmh3bmh4
0030: ... (Ctrl-C pressed)
```

A file starting with 4C495354 ("LIST") is a more complex IFF file; it usually contains a "bundle" of graphics and/or sound images.

1.Workbench:> type hex file.info

```
0000: E3100001 00000000 00000000 00290014   .....
0010: 00050003 00010028 0C500000 00000000   .....(P.....
0020: 00000000 00000000 00000000 00000000   .....
0030: ... (Ctrl-C pressed)
```

A file starting with E310 is a "Workbench object". It's the ".info" file that contains an icon picture and other information about the associated file.

Listing 1 continues ...

menu, under Workbench 1.3, you'll find an item called "Info"; under Workbench 2.0, the item is called "Information..." and it's in the "Icons" menu. Select the icon by clicking on it, then select the menu item, and you'll get a screen full of details about the file and how it's intended to be used.

Computer files are generally classified as either *programs* or *data files*. In Workbench lingo, programs are called *Tools*; data files, *Projects*. If the Info display (see Figure 1) identifies a file as a Tool, you may be reasonably sure that it's a program you can run.

If the file is not a program, it must be some type of data file. There are many kinds of data files: text, spreadsheet, picture, animation, music, AmigaBASIC program, and others. You can often guess the type from the appearance of the icon: many application programs write data files that have distinctive icon pictures. If not, look lower in the Info display for a field called 'Default Tool'. You'll usually find the name of the program that produced this file. That in turn will tell you what kind of file is involved.

... Listing 1 continued

```
1.Workbench:> type hex Utilities:.info
0000: F34C0012 0000126B 0000036D 0000048A      .L....k...m....
0010: 43616C63 756C6174 6F720A50 72696E74      Calculator.Print
0020: 46696C65 730A436D 640A4E6F 74657061      Files.Cmd.Notepa
0030: ...      ( Ctrl-C pressed )
```

A file starting with F34C is a "drawer window". It gives the drawer's window size, and names some of the files in the drawer.

```
1.Workbench:> type hex fonts:ruby.font
0000: 0F000003 72756279 2F313200 00000000      ....ruby/12....
0010: 00000000 00000000 00000000 00000000      .....
0020: 00000000 00000000 00000000 00000000      .....
0030: ...      ( Ctrl-C pressed )
```

A file starting with 0F00 is a "font description". It says what fonts are available for this typeface.

```
1.Workbench:> type hex BasicProg
0000: F5003000 AC20224F 626A6563 74204669      ..0.. "Object Fi
0010: 6C652042 6F6E6550 69636B65 7220202D      le BonePicker -
0020: 20204A20 42757474 65726669 656C6422      J Butterfield"
0030: ...      ( Ctrl-C pressed )
```

A file starting with F500, F600, F580 or F680 is an AmigaBasic program. Much of it looks like text, but parts of the program have been "tokenized". For example, PRINT is coded as single byte AC.

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An AmigaDOS 2.0 red herring

If you have the new AmigaDOS 2.0 operating system, and there's no '.info' file, you may think that this new system will give you extra help. Instead, it may steer you wrong.

If you select "Show/All Files" in the "Window" menu, your 2.0 Amiga will draw pictures of all files, even those that don't have an associated '.info' file. It will draw a picture of a hammer to represent what it thinks is a tool; it will draw a double graphics/text sketch to represent other files (see Figure 2). You might think that if you see the hammer, the file is a tool, which in turn means a program. Not quite.

Here's the problem: the system decides which icon to draw based only on the E ("execute") protection bit. Want to make the program *Humpty* appear as a project, or the data file *Dumpty* appear as a tool? Easy: just command "protect humpty -e" or "protect dumpty +e". The automatic icons will then mislead. Don't worry: a 'real' '.info' file will override this effect, and no matter what the E bit says, you can't run a file if it isn't a program.

Digging deeper

If you can't classify the file based on any of the above, or you want to probe more deeply to make sure it's really what you think it is, you'll need to look at the file itself. The *Type* command will do the job nicely, especially if used with the *hex* option.

Before unveiling the mysteries of *Type hex*, we'll look briefly at the expanded AmigaDOS 2.0 command *Version*. This command, which formerly worked only for libraries, devices, Kickstart, and Workbench, has been enhanced so that it may examine any file. A program or file can include information that *Version* will seek out and display on request. If you use *Version*, the file may yield useful information. But it may not solve our identification objective, since both data and program files are able to include embedded version strings.

Let's try *Type hex*. Enter this command,

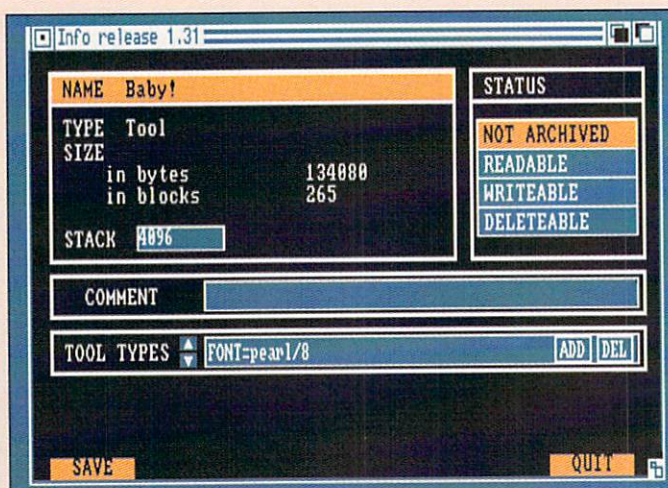


Figure 1. Select an icon, then INFO from the WORKBENCH menu, and you'll see data about the file. TYPE *Project* signals a *data* file. TYPE *Tool* indicates a *Program* file.

followed by a file name of interest. When the display starts to print, hold down the CTRL key and tap C to stop it: you usually need only a few lines to get a good measure of the file.

The output from *Type hex* isn't too hard to sort out. Listing 1 will show you typical displays. On the left, a four-digit 'counter' shows you where you are within the file. This is followed by four groups of eight digits, showing the contents of the file in 'hexadecimal'. (If you can't read hexadecimal, don't fret; it's not needed for this work.) To the right is printable text: if the file contains a character that can be printed, it will be shown; if not, a period will print in that spot. A non-text file will contain some data that incidentally correspond to printable characters. When that happens, you'll see gibberish in the right-hand area; if so, ignore it.

If the right-hand area shows completely readable text - a little broken up due to the 16-character line, but readable - you have a text file and can read its contents with any convenient text reader or editor. You could even use *Type* without the *hex*.

If the display shows other than completely readable material, we'll need to dig deeper. Time to look for the 'magic'.

For example, if the first data display in

the file shows as 000003F3, you have a 'loadable' file. This is an important file type: let's talk about it.

Loadable files

Once you see that initial 000003F3, you might be tempted to say, "Aha! It's a program - I can run it!" Quite possibly you can, but there *are* other types of loadable files.

The Amiga loads files for reasons other than that of starting a program run. Keep in mind, too, that a file may be split into several 'hunks' as it loads, with each piece going to an independent part of memory.

What might we load? Programs, of course; when we load and run a program, we often call this 'starting a new process'.

Libraries (Amiga shared libraries) are loaded as needed: some of them are in ROM (read-only memory), but others, such as *icon.library*, must load from disk when needed. Third-party libraries such as *arp.library* will be of the loadable type too, of course.

Devices, such as *printer.device* are quite similar in structure and usage to libraries. Devices are in the *devs:* area rather than *libs:*, of course. But they too are classed as loadable files, as are the specific printer drivers you'll find in *Devs:printers* and the

Listing 2. A sampling of "loadable" files that are *not* programs.

```
1:Ram-Handler          6464 ----rw-d 02-May-87 19:09:09
libs:icon.library      5688 ----rw-d 02-May-87 19:10:11
devs:printer.device    26964 ----rw-d 09-Mar-89 15:30:12
devs:printers/EpsonQ   6288 ----rw-d 02-May-87 19:12:08
fonts:ruby/12          4556 ----rw-d 02-May-87 19:09:41
```

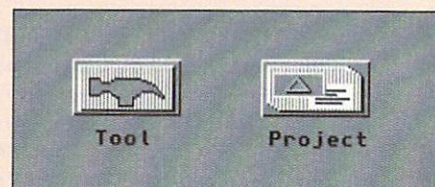


Figure 2: V2.0 default icons.

custom keymaps located in *Devs:keymaps*.

Most of the contents of the *L:* device will be loadable files. These include handlers such as *ram-handler* and *speak-handler*, plus things like *Shell-Seg*.

How about fonts? The fonts themselves (named numerically) are loadable files, but watch for 'font descriptors' (whose file names normally end with '.font') that are not.

Listing 2 gives some examples of files that are loadable - yes, they all start with 000003F3 - but are not programs, at least not from the user's standpoint. And there are other files - overlays and such - that also could come into this category.

Chances are that almost every file you meet that is loadable will be a ready-to-run program. If it's a library, device, font, or whatever, there will be associated information to tell you about it.

Magic

That first value (000003F3 for loadable files) is called a 'magic' value. It's there to

Listing 3. Some IFF file "FORM"s:

```
ILBM - Interleaved Bit Map; graphics
SMUS - Simple Musical Score
MSCX - Music file (Music-X)
8SVX - 8-bit Sampled Waveform; sound instruments
FTXT - Formatted Text
ACBM - Amiga Contiguous BitMap; graphics
WORD - Word Processing (ProWrite) text
HEAD - Idea Processor file (Flow)
ANIM - CEL Animations (VideoScape-3D)
```

help AmigaDOS recognize the type of file.

There's a whole range of magic numbers in that area that you can lump together into a single category. Any starting value ranging from 000003E7 up to 000003FF is part of a 'DOS data structure'. If you get a value in this range, other than the 000003F3 already mentioned, you can classify it as an 'object file'. And you need not worry about this kind of file too much: it's used in program development, but is not part of the final product.

IFF files

A file starting with 464F524D is an IFF file. You can spot this quickly, since this spells the word "FORM" on the right side of the display. There are many types of IFF file, each holding a different type of data. But it's easy to spot the kind you have, since a little further to the right you'll find the four-character 'name' of this IFF FORM type.

Some of the many types of IFF FORMs

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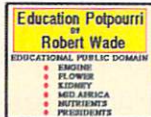
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are given in Listing 3. Where the type is associated with a particular software package, I've made a note of this.

A file starting with 4C495354 (which shows as "LIST" to the right) is a more complex type of IFF file. It may contain groups of pictures or even a whole multimedia show complete with animations and sound.

Other files

So far, we have been examining eight-digit (four-byte, or 'longword') magic values. The remaining magic that we'll discuss here is based on the first four digits only (a 'word').

A file starting with E310 is a 'Workbench object'. We've mentioned this type of file before; its name should end with '.info'.

A file starting with F34C is a 'drawer window'. This file's name should be simply '.info'; it tells about a drawer's window.

A file starting with 0F00 is a 'font descriptor' file: its name should end with '.font'. It's not a font as such (they are loadable files, as mentioned); instead, it gives information describing the fonts available under that font name.

A file starting with F500, F600, F580 or F680 is an AmigaBASIC program. That seems puzzling at first: isn't a program a 'loadable file'? Not with AmigaBASIC: AmigaBASIC itself is the running program, and the user-written code is viewed as data. Keep in mind that AmigaBASIC programs may also be saved as a 'listing' file, in which case that file is simply text and there will be no starting 'magic'.

The ViewDir program

Some time ago, I wrote a program called *ViewDir*. Its purpose was, in part, to snoop files and try to identify them, mostly by means of magic numbers.

If you're interested, you can find the latest version of this program on Fish Disk #357. It comes together with the assembly language source program, if you'd like to read the code.

A Canadian National Treasure, Jim Butterfield has been writing about Commodore computers since their introduction in 1977. His credits include *COMPUTE!*, *COMPUTE!'s Gazette*, and *The Transactor*.



The Instant Talking Alarm-Clock

by Chris Zamara

Need a reminder at a specific time? Forget about alarm clocks or reminder software. Just a simple Shell command is all it takes to get the Amiga to speak a message at an appointed time - without any special software!

Let's say you have to leave to pick up your Aunt Fanny at the airport at 5:15 PM, but you're so engrossed in your 3D modelling project that you're afraid you'll forget all about it. Just type the following two lines into an AmigaDOS CLI or Shell window:

```
run wait until 17:15 +
say "Go pick up Ant Fanny now."
```

The shell prompt will come back right away, leaving your system undisturbed. At the appointed time, however, you'll get the voice message (after a bit of disk activity) - make sure the sound is connected and the volume is turned up! (Note the unorthodox spelling: this is not meant as an insult to beloved Fanny, but merely helps the Narrator a bit with its pronunciation.)

You can use the same technique to wait a specified number of minutes or seconds

instead of waiting for a certain time. Let's say you've just put a frozen pizza in the oven:

```
run wait 15 min +
say "Go check the pizza."
```

You can run any number of these alarm clocks at the same time; each is running a separate process for the *Wait* and *Say* commands, and each will finish and speak its piece at its appointed time. If you haven't used speech on your Amiga since the last time it was rebooted, the first alarm will have to load the speech software from the Workbench disk; after that, only the *Say* command needs to be loaded when the alarm goes off, so disk activity will be reduced. Of course, you could run any other program instead of *Say*: you might like to play an appropriate sound effect or put up a message on the screen instead.

This handy trick uses the special '+' feature of the *Run* command to hold off the execution of *Say* until the *Wait* completes. If you ever wondered what the feature was good for, here's a prime example.



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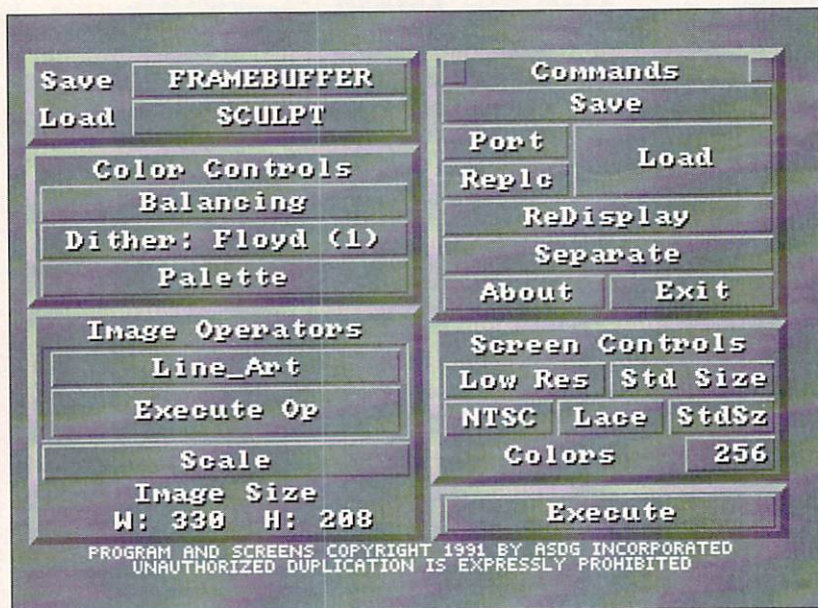
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ADPro's main control screen.

image resolutions. Due to their cost (several thousands of dollars) they're unusual peripherals, but artists often use commercial service bureaus to make slides for them, just as other service bureaus produce typesetting output for desktop publishers.

The Polaroid *CI3000* is a high quality film recorder. It operates with 33 bits of color data, at resolutions up to about 2000 by 1300 (depending on the film type). It connects to the host computer through the parallel port. ASDG packages a special parallel cable for use with the unit, and warns against using standard cables.

OUTPUT VARIETY

While there may be some variance between the hardware configurations offered by Polaroid dealers and Amiga dealers (you should check what camera backs are supplied with the unit you purchase), the *CI3000* sent to me for review came with a Polaroid 'pack film' back of the Land Camera variety, and a 35mm back for use with slide and print film. There are also 4 by 5 inch camera backs available; at this time there is no 35mm motion picture camera back for the unit or any immediate plans for one, but Polaroid has been in contact with after-market developers about the possibility.

The pack film system isn't a source of high quality prints. Development time for these instant prints varies with temperature, so that outside a controlled laboratory it's difficult to get reliable results with the film. I did find it invaluable, though, for proofing the images I worked on before producing my final slides.

The 35mm back will accept any 35mm film, but the *ADPro* module is already calibrated for several Polaroid films. Experimenting with other films would require some trial and error before achieving the right color balance for the film. Polaroid's films include color and black-and-white slide film, white on blue

slide film, instant slides, pack print and transparency films, color and black and white 'Autofilm', and various similar films for the optional 4 by 5 camera back. There's another variety of instant print and transparency film that requires a processing unit.

THE ADPRO INTERFACE

The *CI3000* plugs into the computer's parallel port and has its own power cable. The pack film back simply attaches to the front of the unit, while the 35mm back also has a control cable that allows the film to be advanced through software.

ADPro's CI3000 Saver module simply installs in the user's Savers directory. When it's the current Save format, clicking on *ADPro's* Save button first queries the film recorder to learn which back and film are installed, then presents the user with a requester that offers color balance, centering, and sizing controls. Film calibrations and size settings are remembered from session to session.

While the size of the image determines the length of time it takes to expose a slide, I found that most of my test images (in resolutions from 768 by 480 to 960 by 600, and in some cases over 1000 by 1000) took less than five minutes to render. The 35mm film automatically advances to the next frame; in all, the process is simpler than setting up and using a printer.

ASDG's software documentation is adequate but I did feel that a basic concept or two were glossed over. One important consideration is that the *CI3000* displays and records square pixels, whereas Amiga high or low resolution pixels are taller than they are wide. The *CI3000 Saver* documentation mentions this, but doesn't prescribe any way to preprocess images. Referring back to the main *ADPro* manual, the user finds a description of scaling square pixel images to correct their appearance on Amiga displays, but no mention of sending data to a square pixel device.

The answer's simple, anyway: images should be scaled to about 117 per cent of their height (for low and hi-res pixels) before being output on the *CI3000*. This corrects the aspect ratio of the image so that it won't look compressed.

I also thought that the description of the centering and sizing process could have been better. Provided the user has the pack film back, it only takes a couple of exposures to work it out, but better documentation would have been welcome.

This last is a fairly petty concern, and I have no significant complaints about the hardware or software. The 24-bit images I recorded as slides are beautifully reproduced, and the process of exposing film is simple and direct. The worst moment I had during the review was having to pack the unit up and send it back.

ADPro's versatility and abilities for image translation make an Amiga and *CI3000* system a viable core for an imaging service bureau. With an Amiga 3000, utilities for reading and writing MS/DOS and Macintosh disks, and all the combined features of *ADPro* and the *CI3000*, a service bureau could meet the needs of just about any client on a comparatively inexpensive system.

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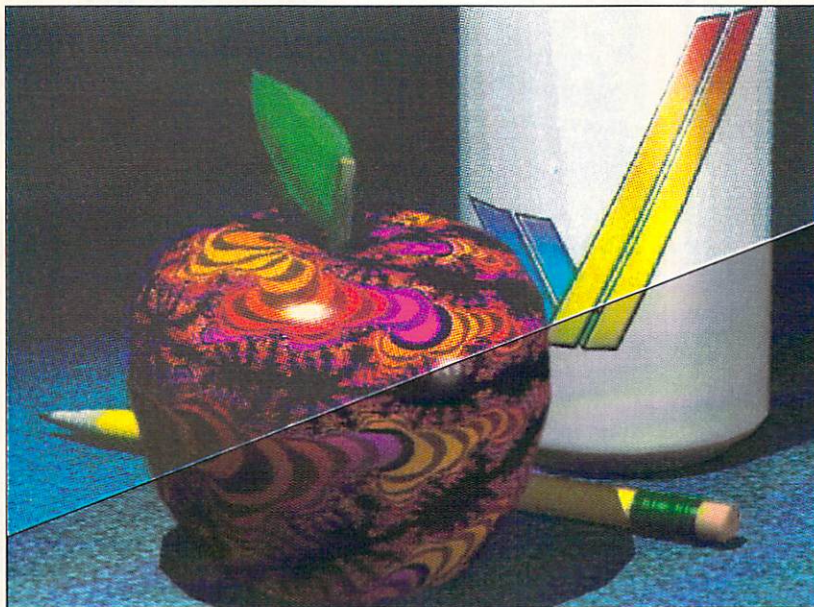
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QMS ColorScript 100



The top of this 24-bit graphic was output to the QMS ColorScript 100 at a resolution of 300 dpi (75 lines per inch) while the bottom was sent to film at 1200 dpi (133 lines per inch).

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First off, I'd like to squelch a rumor. It seems color PostScript printers are being touted as pre-press color proofing systems, eliminating the need for traditional film-based color proofs. This is not true. People have unfortunately lost sight of the fact that what you see on paper may not be the same as what you see on film. While it is true you can get an accurate proof of what you *wish* to obtain, only a traditional color proof pulled from the negatives can show you exactly what will be printed on the presses...provided, of course, you have paid homage to the proper plate, press, and paper deities.

Now that we have an understanding of the process, I can go on to what color printers are really for. They are answers to all the gnawing little questions that wake designers up at four-thirty A.M. *'How will those puce lines go with the teal background? Is there enough contrast in the red logo to lead the reader's eye away from the robot erotica and entice him to read the product text? Isn't black text too - you know - boring?'* Well, sleep tight my little pretties, QMS is about to become your personal sandman.

The QMS ColorScript 100 model 30i is a 300 dots-per-inch thermal printer, with the capability of printing 16.8 million colors via the Adobe PostScript page-description language. It has 35 resident fonts, and connects to RS232C, RS422, Centronics parallel, Apple-

Talk ports, and maybe even a radar detector. It retails for \$12,995.00, which may send your checkbook reeling, but hey, this is for business, so let's keep it in perspective. If you and your staff of five are willing to stay home from the annual Seybold seminars for two years running, you have just paid for the printer of your dreams. Better yet, count the number of times you received film and match prints only to rework the layout. 105 mistakes would pay for the printer and its supplies.

You see, these supplies are cheap compared to what a professional designer typically runs up against. A color proof can easily run \$75. But with the *ColorScript*, that same page runs between 56 and 83 cents for the special thermal paper and transfer film inks. (Supplies can be ordered directly from QMS.)

There are two sizes of paper and corresponding ink film. To change sizes you must change both. The smaller size uses an 8.5x11 inch sheet, but in order for the machine to print four colors it needs four passes, so much of the paper is reserved for feeding and gripping, leaving you with only 8.1x8.9 inches of active print area. Size B paper is 11x17, with a substantial 10.6x14.9 active area. Our final output film is 10x13 so the color proofs have room for crop marks, bleed area, and registration marks.

It is fascinating to watch the QMS print a page. It pulls paper from a holding tray located at the back of the top of the printer. It feeds the page through rollers, thermally imprinting one color to the appropriate areas and onto the the output area on the top. The page stands almost straight up against a plastic sleeve, but like slow motion slapstick, just as you reach for the page it reverses course and goes back inside for another pass and another color. On the final pass it gives an extra little shove, landing the page on a ledge where it sits out of the way of future pages. The registration is remarkably accurate.

For the most part, I sent *Professional Page V2.0* output directly to the QMS. I settled on 75 lpi and no color correction. It color corrected a teal color as green (when off) or blue (when on), but never as teal. Some of this may be due to the QMS printer, which leans towards strong, vibrant colors, but I am sure the lack of an Amiga color PostScript printer driver didn't help.

All in all, I found the QMS ColorScript 100 to be a great tool (yes tool, not toy), for desktop publishing four-color work. Among our favorite uses for this printer was producing original art for small runs of four-color promotional materials. We took the page to our local color copier center and had them run off 100 copies at a cost well below what a printer could quote, and the turnaround time is much shorter, usually same day service. If your business needs a color PostScript printer, don't buy before you look at this one. ★

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128	133	138	143	148	178	183	188	193	198	228	233	238	243	248
129	134	139	144	149	179	184	189	194	199	229	234	239	244	249
130	135	140	145	150	180	185	190	195	200	230	235	240	245	250

A. Which type of Amiga do you own?

- 1 ☐ Amiga 500 4 ☐ Amiga 2500
2 ☐ Amiga 1000 5 ☐ Amiga 3000
3 ☐ Amiga 2000 6 ☐ None

B. Which of the following software products are you likely to purchase within the next year?

- 7 ☐ Desktop Publishing
8 ☐ Wordprocessing
9 ☐ Video
10 ☐ Graphics/Animation
11 ☐ Sound/Music
12 ☐ Productivity
13 ☐ UNIX
14 ☐ Entertainment
15 ☐ Educational

C. Which of the following hardware products are you likely to purchase within the next year?

- 16 ☐ Mass Storage 19 ☐ Video Hardware
17 ☐ Accelerators 20 ☐ Monitors
18 ☐ Printers 21 ☐ Other

D. What applications are your primary interests?

- 22 ☐ Desktop Publishing
23 ☐ Wordprocessing
24 ☐ Video
25 ☐ Graphics/Animation
26 ☐ Sound/Music
27 ☐ Productivity
28 ☐ On-line Services
29 ☐ UNIX
30 ☐ Entertainment
31 ☐ Educational

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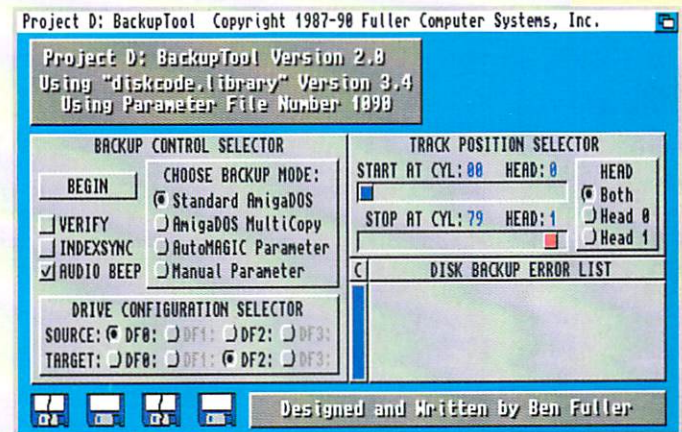
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In early 1982 a group of brilliant computer designers in Los Gatos, California set out to create a new kind of computer. Their dream was to build a machine that would contain the visual power that other computers lacked. So they designed breakthrough graphic coprocessors, powerful sprites, and then built it all around NTSC video timing. The nickname for the machine was Lorraine, and its mascot was a red and white bouncing ball.

Thanks, Jay

In October of 1985 Jay Miner and his team of pioneers brought a stunning new creative tool to the world. The Amiga was a shining beacon of the future to a special breed of hackers, artists, and visionaries. One group of these hackers was drawn together from



Team Toaster:

Hardware:

Tim Jenison,
Brad Carvey,
Gary Krohe,*
Charles Steinkuehler.

Software:

Tim Jenison,
Stuart Ferguson,
Steve Hartford,
Allen Hastings,
Daniel Kaye,
Steve Kell,
Jamie Purdon,
Steve Speier,
Peter Tjeerdsma,
Ken Turcotte.

Documentation:

Robert Blackwell,
Nick Lavroff,*
Brent Malnack,
Steve Peterson,*
Tony Stutterheim.
Software Design:
Paul Montgomery,
Mark Randall,
Kiki Stockhammer.

*not pictured

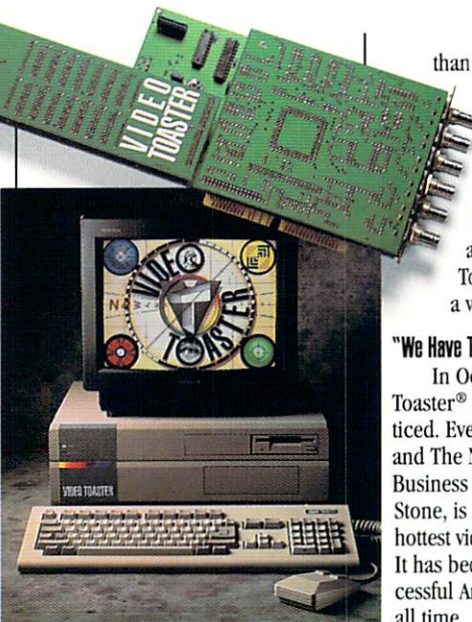
around the country to form NewTek in Topeka, Kansas. They shared a common desire to expand on the technological marvel called the Amiga. They saw the Amiga as more than a computer, it was the beginning of a revolution.

The Super Amiga

What if the Amiga had more resolution, more colors, more power,



These 8 disks represent over 50 man-years of programming effort.



more speed; in short, more of everything that makes the Amiga great? It wouldn't be like a computer anymore. It would be as powerful as expensive network-level video equipment. But it would mean designing four complex VLSI chips, it would mean writing 350,000 lines of assembly language software. Ultimately it would mean inventing whole new technologies. Just the kind of insane challenge that hackers can't resist. Perhaps more than anything, the fact that "it couldn't be done" is what drove "Team Toaster" to do the impossible.

"It'll Never Ship"

In early 1987, Team Toaster moved away from the rest of NewTek to a secret location codenamed "Alcatraz." No office hours, no phone calls, no interruptions. They worked 70 hour weeks. They invented bizarre tricks to drive the 68000, copper, and blitter to new levels of performance. They evolved strange hardware hacks to emulate expensive parts. They concocted their own cinnamon candy. Building the Video Toaster became a more ambitious project

than the Amiga itself. Every night, every weekend, every holiday, the world went about its business, and the lights at 'Traz kept burning. It didn't matter what anyone else said, Team Toaster was racing after a very personal dream.

"We Have Toast"

In October 1990 the Video Toaster® shipped. The world noticed. Everyone from USA Today and The New York Times, to Business Week and Rolling Stone, is calling the Toaster the hottest video product ever. It has become the most successful Amiga product of all time.

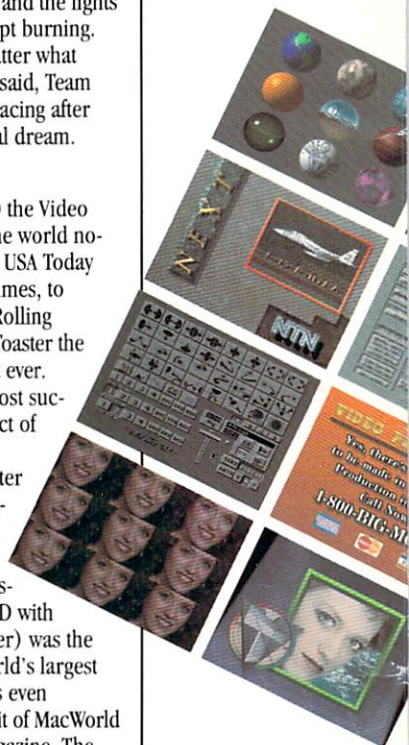
In fact, the Toaster is so hot that it's bringing the Amiga to new markets. The Video Toaster stand-alone system (an Amiga 2000HD with factory-installed Toaster) was the hit of Comdex, the world's largest IBM PC show, and was even acknowledged as the hit of MacWorld Expo by MacWeek Magazine. The Video Toaster is giving our dealers the opportunity to win over the corporate, educational, and pro video users that the Amiga needs for success in the nineties.

When the Amiga shipped in October 1985 it held the promise of video on a desktop. The shipment of the Video Toaster fulfills that promise. And by the way, the lights are still on at 'Traz.



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This sign sat proudly in front of Amiga headquarters in Los Gatos, California, where the desktop video revolution began in October of '85.

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